



# **Saudi Arabian Petrochemicals**

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**Saudi Basic Industries Corp (SABIC)**  
**Yanbu National Petrochemical Co (YANSAB)**  
**Saudi Kayan Petrochemical Co (KAYAN)**

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## Investment Thesis

According to the International Energy Agency, demand for petrochemicals has nearly doubled since 2000 and the sector currently consumes around 14 percent of daily global oil use as well as 8 percent of gas. Moreover, demand for petrochemicals is expected to grow by 30 percent by 2030 and 60 percent by 2050, which would require incremental demand of 7mn barrels of oil per day. New capacity additions are also coming underway, but the increase in supply is expected to be less than demand growth over the long-run, exerting an upward pressure on petchem prices. Industries that drive demand for petrochemical products include automotive, textile, construction, pharmaceutical and consumer goods among others. With that said, the ongoing trade tensions between China and the US will most certainly affect global demand for various industries. Whether tensions escalate or wind down will be a decisive factor for the strength of global trade and potentially affect petrochemical demand.

The petrochemical sector in Saudi Arabia is indirectly incorporated in the Vision 2030 since it will be one of the main sectors that will aid in boosting non-oil exports. This positions the petrochemical sector as a key pillar for the country's economy, resulting in significant investments by the government in the sector, along with encouragement of investor participation and support for Saudi-foreign joint ventures for new petrochemical projects.

Saudi Basic Industries Corp. (SABIC) is involved in the production of petrochemicals, agri-nutrients, specialties and metals. Nevertheless, petrochemicals make up almost 90 percent of the company's sales. For SABIC, vital changes are currently underway. First and foremost, Aramco's acquisition of PIF's 70 percent stake in the company is expected to create some synergies as well as provide for SABIC a more stable and relentless flow of feedstock needed for its production. Second, SABIC is establishing a company called SABIC Agri-nutrient Investments to consolidate all its equity shares and assets currently held in several companies that are specialized in the production of agri-nutrient products. The newly formed company will then be acquired by SAFCO, a subsidiary for SABIC. This move is expected to aid SABIC's ambition to grow its agri-nutrients business into a global leading position. Third, SABIC has recently announced its plan to merge two of its wholly owned subsidiaries, Sadaf and Petrokemya, in order to create a more efficient entity that would enhance the optimization of assets and increase value due to synergies. These moves come as part of SABIC's transformation program that was announced some years ago, and is expected to enhance agility across all its operations.

We initiate coverage on SABIC with Hold rating and SAR 130, 12-month target price. Our DCF valuation assumes 12-88 debt-equity mix, resulting in 9.2% WACC. It is important to note that the company's stock price is expected to temporarily diverge away from its intrinsic value due to KSA's recent inclusion in the FTSE Emerging Market Index and the upcoming inclusion in the MSCI EM Index, and SABIC will be a main beneficiary from the anticipated inflow.

SABIC's production is mainly achieved by affiliates where it holds significant stakes. Two of SABIC's main affiliates are Yanbu National Petrochemical Co. (Yansab), of which SABIC owns 51%, and Saudi Kayan Petrochemical Co. (Kayan), of which SABIC owns 35%. Yansab operates SABIC's largest petrochemical complex, while Kayan is the first producer of polycarbonate in the Middle East. Together, the two companies are responsible for the production of numerous end products that are vital for SABIC's sales and performance.

We initiate coverage on Yanbu National Petrochemical Co. (Yansab) with a Hold rating and SAR 73, 12-month target price and for Saudi Kayan Petrochemical Co. (Kayan) with a Hold rating and SAR 14, 12-month target price.



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## Investment Risks

SABIC is the largest listed company on the Saudi exchange by market capitalization with decades-long operational track record. The following section highlights potential risks that could impact our financial projections and consequent share performance. More than 85 percent of the company's revenues are derived from international markets, which exposes it to global and industry trends. Moreover, since feedstock makes up considerable portion of the company's cost structure, volatility in prices could have immense effect on earnings. Investors are advised to prudently consider each risk before making an investment decision.

### *Crude price fluctuation*

Since crude oil, along with its derivatives, constitute feedstock for petrochemicals, high volatility of crude prices affect the investment, production, and financial decisions of petrochemical companies to an extent. Correspondingly, input costs pass through to end product prices. The latest drop in oil price and potential continued weakness suggests product price pressure ahead.

### *Additional subsidy cuts*

Petrochemical companies in Saudi Arabia commanded significant competitive advantage over international producers, since feedstock was heavily subsidized. However, at the end of 2015, after a steep drop in oil price, the government of Saudi Arabia announced that the prices of basic feedstock would be increased in order to reinforce its fiscal goals of cutting energy subsidies and easing the country's budget deficit. Methane gas price was increased from USD 0.75/MMBtu to USD 1.25/MMBtu and the price of ethane which is the main raw material used by petrochemical companies was lifted even further, from USD 0.75/MMBtu to USD 1.75/MMBtu. These changes eroded cost competitiveness of Saudi companies. While we expect low probability of a feedstock price hike in 2019, we believe that price revision is inevitable as the government narrows revenue leakage to subsidies. The impact on domestic producers' costs and future investment decisions will be material.

### *Aramco acquisition*

Saudi Aramco is moving ahead with acquiring Public Investment Fund's (PIF) 70 percent stake in SABIC which in our view will unlikely result in a substantial shift in operational strategy. However, possibility exists for SABIC to embark on new projects which could entail significant capex program and associated funding requirement. Leverage levels may rise, elevating rate risk. Conversely, SABIC could potentially benefit from feedstock availability as a sister company of Aramco.

### *Slower global growth*

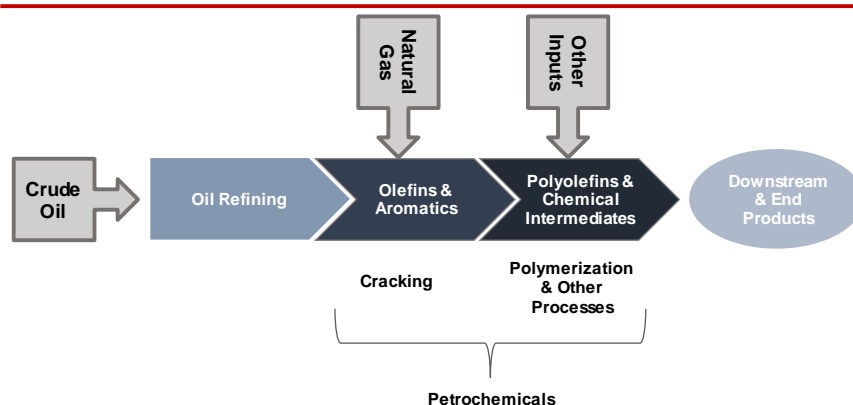
Following a near decade long global growth phase, signs of slowdown are emerging with IMF revising growth forecast lower. Demand for commodities is expected to cool down and could impact product price outlook. Second, since 2000, investment costs with respect to capex per ton of chemicals produced has gradually increased, due to locations, tighter construction market conditions and declining efficiencies. SABIC's future expansion plans may be subject to demand outlook and capital deployment decisions.



## Industry Overview

As a diversified industrial giant, SABIC operates across three main verticals: petrochemicals, agri-nutrients and steel. Since 83% of sales volume is derived from petrochemicals, we focus on this segment in this section (for agri-nutrients, please see our coverage of SAFCO). The global petrochemical industry is capital intensive, competitive and reliant on technological innovation. Petrochemicals consume some 10% of the oil and gas industry's output. However in monetary terms, the percentage is much higher given the value added. By 2030, petchems are expected to constitute one-third of oil demand growth, rising to 50% by 2050 (equivalent to 7 mbpd of incremental demand).

FIG 1: HIGH LEVEL PROCESS

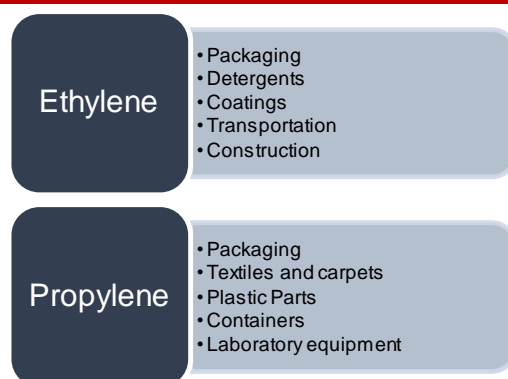


Source: Company Reports

## Continuous Innovation to Support Growth

The industry initially evolved out of technological innovation in the developed industrialized economies (U.S., Western Europe and Japan). However, over the past few decades, production in countries with competitively priced feedstocks has increased. Global petchem industry is expected to grow at +6.7% CAGR over the next five years to top USD 1 tn, driven by rising income levels and propelling demand from automotive, textile, construction, pharmaceutical and consumer goods industries. Ethylene comprises c. 40% of the market with end-uses in packaging, detergents, coatings, transportation and construction.

FIG 2: ETHYLENE/PROPYLENE END USES

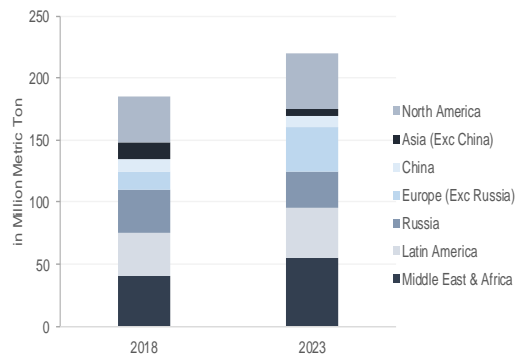


Source: MDPI, Argam

Global ethylene capacity is projected to rise to 220mt by 2023 from 185mt in 2018. Just over 40% of this addition will come from the MENA region. During the same period, demand growth is expected to outpace capacity addition, according to IHS Markit.

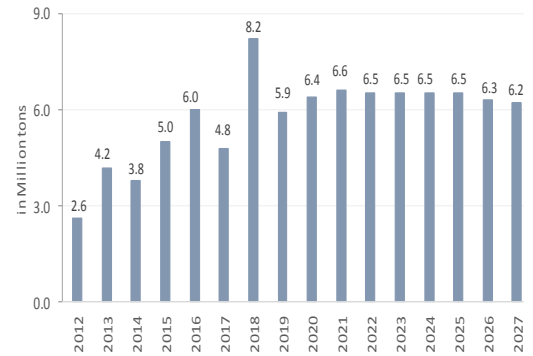


FIG 3: GLOBAL ETHYLENE CAPACITY SET TO HIT 220MN METRIC TONS BY 2023



Source: EMS Database - Petrochemical Report by FitchSolutions

FIG 4: GLOBAL ETHYLENE ANNUAL DEMAND GROWTH (MN TONS)

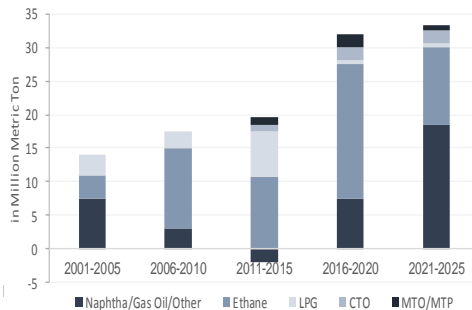


Source: IHS Markit

## Feedstock

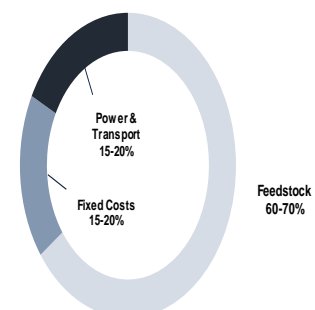
Feedstock availability has been a critical factor behind capacity addition. Petrochemicals are derived from natural gas (ethane), condensates, naphtha and biological products. Ethane is derived from gas and natural gas liquids (NGLs) while naphtha is more prevalent in crude oil. Since each feedstock has a unique composition of hydrocarbons, the yield varies. For example, naphtha yields 30% ethylene and 70% byproducts versus 80% ethylene and 20% byproducts from natural gas. Roughly half of global capacity relies on naphtha with China as the largest producer (29%) and consumer (28%). U.S. and Middle East producers favor natural gas as primary feedstock given abundant availability. Feedstock is the largest component of production costs and can provide significant competitive advantage.

FIG 5: GLOBAL ETHYLENE GROWTH BY FEEDSTOCK (MILLION METRIC TONS)



Source: IHS Markit

FIG 6: PETROCHEMICAL COMPANIES COST OF PRODUCTION DISTRIBUTION



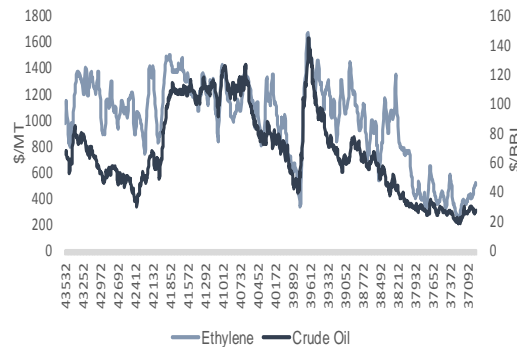
Source: Krungsri

Movement in feedstock prices is one factor impacting product prices. Ethane and methane are an exception, since their prices are currently fixed by the Saudi government. Upstream product prices (ethylene, propylene) show 70-85% correlation to feedstock prices. Producers optimize margins by capturing the spread between product-feedstock price. Another factor affecting petrochemical products is oil price. The price of oil and petrochemical products is highly correlated, to the extent that a study by ICIS showed a 96% correlation between oil and ethylene prices. Nevertheless, it is important to note that supply and demand specifics of each product also play an important factor in determining the prices.



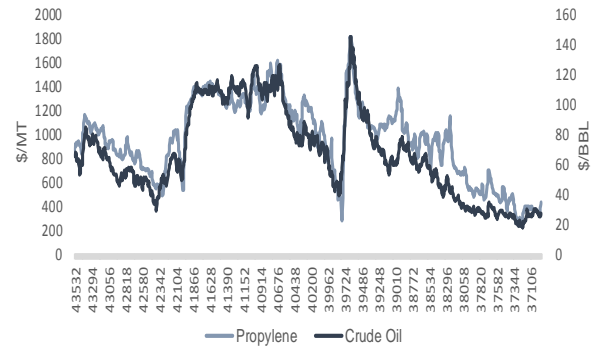


FIG 7: ETHYLENE (\$/MT) VS CRUDE OIL (\$/BBL)



Source: Bloomberg

FIG 8: PROPYLENE (\$/MT) VS CRUDE OIL (\$/BBL)



Source: Bloomberg

## Production Process

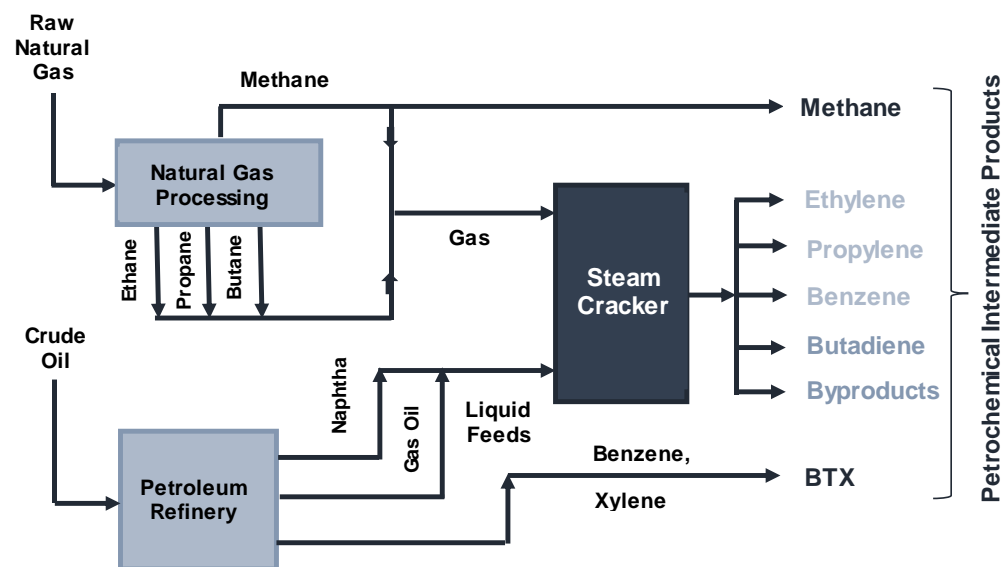
The industry initially evolved out of oil and gas processing by adding value to waste byproduct, resulting in adhesives, explosives, additives, pharmaceuticals, solvents, synthetic rubber and plastics. Large and complex manufacturing chains are interconnected forming a petrochemical complex. Plant construction takes three to seven years on average, requiring careful assessment of future market conditions (supply-demand balance). Historically, the industry cycle (peak-to-trough) spans six to nine years. However with continuous innovation and non-uniform growth, cycle dynamics may change in the future. Petrochemical plants are usually integrated with the oil and gas industry, supplying feedstock. Production can be broken down into four primary stages:

- i. **Feedstock preparation:** This involves receiving feedstocks, which largely come from the oil and gas industry.
- ii. **Upstream petrochemical industry:** The upstream producers convert feedstock into two product groups according to molecular structure: olefins and aromatics. Olefins include methane, ethylene, propylene, and other chemicals formed from 4 carbon atoms (mixed C4). Aromatics include benzene, toluene and xylene, that are used for further processing.
- iii. **Intermediate petrochemical industry:** The intermediate producers convert upstream products into intermediates (for example styrene and vinyl chloride) to be consumed by downstream uses.
- iv. **Downstream petrochemical industry:** Upstream and intermediate products are converted for use by other industries. Downstream products can be divided into 4 main groups:
  - Plastic resins - used in the production of packaging products, building materials, consumer goods, as well as automotive manufacturing. The main plastic resins include polyethylene, polypropylene, poly vinyl chloride (PVC) and polystyrene.
  - Synthetic fibers - polyester and nylon fiber are used by numerous industries, including packaging and textiles.
  - Synthetic rubber/elastomers - styrene-butadiene and styrene-butadiene rubber (SBR) are used in the manufacturing process of consumer goods, tires and automotive parts.
  - Synthetic coating and adhesive materials - polycarbonate and polyvinyl acetate are used in the construction industry as well as a number of other industries.

Ethylene is produced through a process called steam cracking, whereby hydrocarbons are thermally broken down (cracked) into smaller molecules.



FIG 9: FEEDSTOCK PROCESS



Source: Argam

### Demand Drivers

Plastic consumption between developing and developed countries varies substantially. Data indicates that developing countries consume around 4 kilograms per capita of key plastic resins, but with higher growth potential. On the other hand, developed countries consume between 55 and 80 kilograms per capita of the same plastic products, but hold lower potential for growth. Packaging constitutes some 36% of global demand for plastic, including consumer and industrial end uses. Rising income levels and urbanization in developing economies will propel demand for consumer goods such as FMCG and synthetic textiles. Second, global economic growth, cut to 3.5% for 2019 by IMF, will be a strong driver for construction and transportation end uses. Slowing growth in China (below 6.5%) is raising demand concern however we believe other emerging economies could help mitigate impact. Third, the search for lighter, stronger and cheaper alternative will maintain focus on innovation. Rising environmental concerns may fuel push for alternatives (biodegradable, recyclable).

BMI expects KSA petrochemical sector to grow by an average +5.6% over the next four years as the country accelerates the development of large scale downstream projects. Installed capacity is expected to nearly triple from 12 mt in 2016 to 34 mt in 2030.

### Petrochemical Industry in KSA

Saudi and regional petrochemical companies enjoy feedstock cost advantage over their European and North American peers thanks for large discounts. Two events in the last three years have eroded cost advantage: 1) weaker oil and gas prices and 2) gradual removal of subsidies. Ramp-up in shale production and weak global demand have pressured average oil prices lower since 2015. Consequently, feedstock costs declined and narrowed Saudi producers' advantage. Further, international producers have been optimizing costs over a number of years while domestic companies enjoyed low energy and labor costs, in addition to negligible corporate taxes. Second, Saudi Arabia launched National Transformation Program in 2016 with the aim of diversifying revenues and cutting subsidies. This resulted in feedstock price hike in 2016 with potential for further increases in the upcoming years until reaching benchmark prices.



**TABLE 1: KSA PETROCHEMICALS CAPACITIES: 2015-2023 (METRIC TONS)**

	2015	2016	2017	2018	2019E	2020E	2021E	2022E	2023E
Acrylonitrile butadiene styrene	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Ammonia	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Benzene	1.3	1.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Ethylbenzene	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Ethylene dichloride	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Ethylene glycol	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Ethylene oxide	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Ethylene	16.7	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
High density polyethylene	5.1	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Low density polyethylene	1.3	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Linear low density polyethylene	4.8	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PE	11.1	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
Methanol	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
Polyethylene terephthalate	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Polypropylene	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Propylene	6.6	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
PS	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PVC	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Styrene	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Urea	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vinyl acetate	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Vinyl chloride	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Vinyl chloride	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
<b>Total Capacity</b>	<b>87.9</b>	<b>92.0</b>	<b>92.2</b>	<b>92.2</b>	<b>92.2</b>	<b>92.2</b>	<b>92.2</b>	<b>92.2</b>	<b>92.2</b>

Source: EMS Database -Saudi Arabia Petrochemicals Report - 2Q19

Historically, the domestic industry developed through joint ventures with international producers. More recently, Saudi Aramco and Dow Chemical partnered to form the USD 20bn Sadara Chemical, which is the world's largest integrated complex and boasts fixed feed cracker. Sadara will increase specialization through production of polyols and isocyanates. In addition, Aramco and Total signed an MoU to develop the USD 9bn, 2.7 mt Amiral complex in Jubail, with production slated for 2024. Further, domestic producers are increasingly targeting expansion outside Saudi Arabia to target key markets (for example Advanced Petrochemical, SABIC). Petrochemicals contribute SAR 45bn to the Saudi economy and comprise a major portion of exports. Vision for the sector includes further move downstream into specialty and high performance plastics.

**TABLE 2: KSA OLEFINS AND BASIC POLYMERS CAPACITIES (MILLION METRIC TONS)**

	Ethylene ropylene	HDPE	LDPE	LLDPE	Total PE	PP
Ibn Zahr	0.0	1.1	0.0	0.0	0.0	1.1
Arabian Petrochemicals	2.3	0.3	0.4	0.0	0.4	0.0
Kemya	0.8	0.0	0.3	0.2	0.9	0.0
Yanpet	1.6	0.0	0.4	0.0	0.4	0.3
Jubail United Petrochemical Co	1.0	0.0	0.4	0.0	0.0	0.0
Saudi Polyolefins	0.0	0.7	0.0	0.0	0.0	0.7
Advanced Petrochemical Co	0.0	0.5	0.0	0.0	0.0	0.5
NatPet	0.0	0.4	0.0	0.0	0.0	0.4
SEPC	1.0	0.3	0.4	0.4	0.0	0.0
Yansab	1.3	0.4	0.4	0.0	0.8	0.4
Petro Rabigh	1.6	0.9	0.3	0.2	0.6	0.7
Sharq	2.9	0.0	0.4	0.0	1.2	0.0
Al-Waha	0.0	0.5	0.0	0.0	0.0	0.5
Saudi Kayan	1.5	0.6	0.4	0.3	0.0	0.4
Saudi Polymers	1.2	0.2	1.1	0.0	0.0	0.4
National Chevron Phillips	1.2	0.0	0.6	0.0	0.6	0.4
Sipchem	0.0	0.0	0.0	0.2	0.0	0.0
Satorp	0.0	0.2	0.0	0.0	0.0	0.0
Sadara	1.5	0.4	0.4	0.4	0.4	0.0
<b>Total</b>	<b>17.8</b>	<b>6.5</b>	<b>5.5</b>	<b>1.6</b>	<b>5.1</b>	<b>5.7</b>

Source: Company Reports



### *Crude-to-Chemicals (CTC)*

IHS Markit sees crude-to-chemicals as the next evolution of the industry. Perhaps reflecting this view supports the rationale for greater cooperation between Aramco and SABIC. The two companies announced a joint venture to develop CTC complex in Yanbu, targeted to process 400 kbpd of oil (or 9 mt of chemicals per annum) starting 2025. In 2018, Aramco announced intention to acquire PIF's (Public Investment Fund) 70% stake in SABIC. CTC plants are expected to have 10x processing capacity versus conventional plants and twice as much yield per barrel of oil. For example, conventional plants cracking naphtha yield 17% to 20% (integrated complexes) while CTC could reach up to 40% yield per barrel.



## Main Beneficiary from Foreign Inflows

Saudi Basic Industries Corp. (SABIC), a joint stock company incorporated under the laws of Saudi Arabia, is a holding company for a group of companies that together constitute the Middle East's largest non-oil industrial group. SABIC's main business is the manufacture and sale of basic chemicals, intermediates, polymers, fertilizers and metals. It is one of the world's leading producers of basic chemicals, intermediates and polymers.

### Petrochemicals projected to grow +6.7% through next 4 years

SABIC is exposed to changes in the global economic environment and specifically the main regions where it conducts business. The company's topline is affected by economic cycles that influence end-user industries such as automotive and construction, since the company's products are used as intermediates in the manufacturing process of the products utilized by these industries. With that being said, the mentioned industries along with rising income levels are expected to drive growth for global petchem industry for the next 4 years at +6.7% per annum. Capacity of ethylene, which comprises c. 40% of the petchem market, is expected to increase from 185mt in 2018 to 220mt in 2023.

### Feedstock impact well-managed

In 2016, the government of Saudi Arabia reduced subsidy on (increased prices of) two of the main petchem feedstock; ethane and methane. SABIC was successful in limiting the impact of this move. It managed to do so by increasing efficiency and cutting costs, but the fact that the company buys more than 40% of its feedstock from outside of KSA also helped. Another round of cuts is expected to take place by 2021 and how SABIC copes with them will be a decisive factor in the company's future performance and valuation.

### Strong margins and low leverage

Operational efficiency along with advantaged feedstock prices have resulted in SABIC having superior margins compared to its peers. In 2018, SABIC achieved 34.1% gross margin versus peer median of 20.8%, EBITDA margin of 30.7% versus peer median of 25.5% and net margin of 12.7% versus peer median of 11.2%. Moreover, the company was able to cut down its total debt from C. SAR 80bn in 2012 to SAR 42.4bn in 2018, placing the company in another advantaged spot compared to its peers.

### Key beneficiary of foreign inflows

KSA has already joined the FTSE Emerging Market Index and will also join the MSCI EM Index later this year. This will result in billions of passive fund inflows to come in to the Saudi market. SABIC is expected to be a key beneficiary from these inflows, which will exert upward pressure on the price of its shares.

### Initiate with Hold and SAR 130 target price

We applied DCF and relative valuation blended approach to value SABIC. For DCF, we assume 12-88 debt-equity mix yielding 9.2% WACC. We arrive at a fair value of SAR 130 per share, equating to 15.5x 2019E P/E versus 12.2x for global peers. In our view, the premium is justified considering substantially higher margins SABIC commands relative to peers.

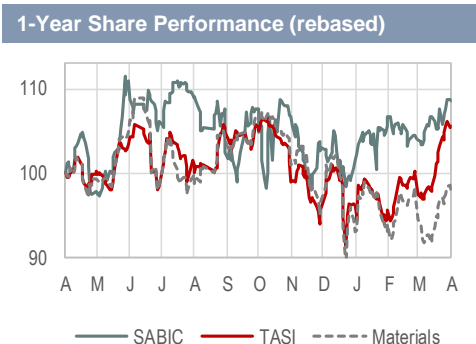
Rating Summary	
Recommendation	Hold
12-Month Target Price (SAR)	130
Upside / (Downside)	8.3%
Dividend Yield	4.1%
Expected Total Return	12.4%

Stock Details (SAR)	
Last Close Price	120.00
Market Capitalization (mn)	360,000
Shares Outstanding (mn)	3,000
52-Week High / Low	131.40 / 104.60
Price Change (YTD)	7.8%
12-Mth ADTV (000s)	3,663
Reuters / Bloomberg	2010.SE / SABIC AB

	2018	2019E	2020E
Revenue (mn)	169,090	170,346	178,060
EBITDA (mn)	51,887	55,712	47,554
EPS	7.18	8.50	6.61
DPS	4.40	5.00	5.50

Key Shareholders	
Public Investment Fund	70%
GOSI	5.7%
Free Float	24.3%

Price Multiples			
	2018	2019E	2020E
P / E	16.7x	14.9x	19.3x
EV / EBITDA	7.0x	6.8x	8.0x
P / S	2.1x	2.2x	2.2x
P / B	2.1x	2.0x	2.0x



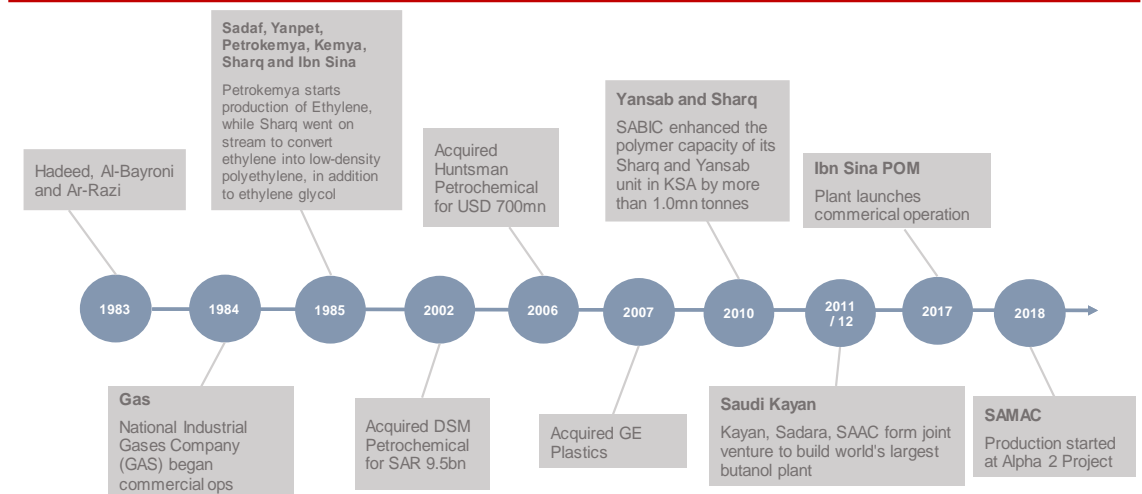
Source: Bloomberg, Tadawul



## Company Background

Saudi Basic Industries Corporation (SABIC) is a diversified manufacturing company that produces petrochemicals, polymers, fertilizers and metals. It is the largest company in the Middle East by market capitalization and is 70% owned by the Public Investment Fund (PIF) of Saudi Arabia. SABIC operates in more than 50 countries around the world, including 62 manufacturing plants and innovation hubs across Americas, Europe, Asia and Middle East. Headquartered in Riyadh, SABIC employees 34,000 personnel. In 1984, SABIC became publicly listed, offering 30% to investors while 70% stake was retained by the government.

FIG 10: SABIC'S TIMELINE



Source: Company Reports

### Brief History

Up until the 1970s, gas (byproduct of crude production) was flared. However the steep increase in oil prices from USD 2 to 30, created potential for associated gas recovery and processing in the Kingdom. The government developed the Master Gas System to take advantage of gas not only as a source of energy but also as a means to establish domestic petrochemical industry. Jubail on east and Yanbu on west coast were selected as the industrial cities. In order to encourage businesses, including petrochemical firms, to open in these cities, the commission founded Saudi Basic Industries Corporation (SABIC) in 1976. Construction in the cities of Jubail and Yanbu started in 1977 while SABIC was also preparing to commence operations.

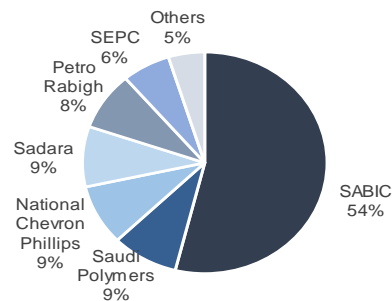
The company signed a number of joint venture agreements with international partners to provide technological support and know-how in exchange for low cost feedstock. By the end of the decade, SABIC already had its first manufacturing affiliates. Saudi Methanol Company, or Ar-Razi, was formed in partnership with Mitsubishi Gas Chemical Company to produce methanol, Al Jubail Fertilizer Company (SAMAD) was formed in partnership with Taiwan Fertilizer Company to produce ammonia and urea, and the Saudi Arabian Fertilizer Company (SAFCO) was formed to produce ammonia, melamine, urea and sulfuric acid. In 1980, the company formed the Saudi Iron and Steel Company (Hadeed) along with new partnerships. Saudi Petrochemical Company (SADAF) was formed in partnership with Pecten Arabian, which is a subsidiary of Shell, and Saudi Yanbu Petrochemical Company (YANPET) was formed in partnership with Exxon. These two companies developed to become diversified petrochemical producers. SADAF produced styrene, ethanol and ethylene while YANPET produced more downstream products such as polyethylene and ethylene glycol. Moreover, Al Jubail Petrochemical Company (KEMYA) was formed in partnership with Exxon Mobil to produce ethylene and polyethylene. In 1981, Eastern Petrochemical Company (Sharq) was formed as part of a consortium that was led by Mitsubishi to produce ethylene glycol, and National Methanol Company (Ibn Sina) was formed in partnership with Hoechst and



Poan Energy to produce chemical grade methanol. In 1982, most of SABIC's subsidiaries had already been formed and the construction phase was underway.

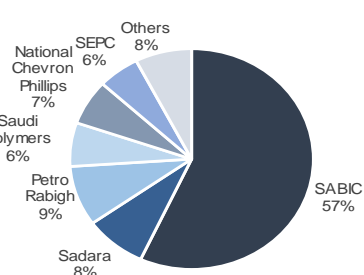
Hadeed was the first of SABIC's subsidiaries to begin production (steel products) in 1982. In 1983, Ar-Razi and SAMAD started production. Additionally, the company started exporting that year - Ar-Razi shipped 33,000 metric tons of chemical grade methanol to Japan. The number of SABIC subsidiaries continued to grow as the National Chemical Fertilizer Company (Ibn Al-Baytar) was formed to produce argon, nitrogen and oxygen plus the Saudi European Petrochemical Company (Ibn Zahr) was formed to produce methyl tertiary butyl ether (MTBE) and polypropylene. New affiliates Arabian Industrial Fibers Company (Ibn Rushd) and Ibn Hayyan Plastic Products Company were formed. In 1998, the company restructured its operations to include five main SBUs: Basic Chemicals, Intermediates, Polymers, Fertilizers and Metals. Between 1999 and 2001, the company increased its production capacity from 25 to 35 mt. In 2002, it bought the petrochemical business of Netherland's DSM for EUR 2.2bn which was the company's first operational presence outside the Middle East.

**FIG 11: SABIC'S MARKET SHARE - PE BUSINESS**



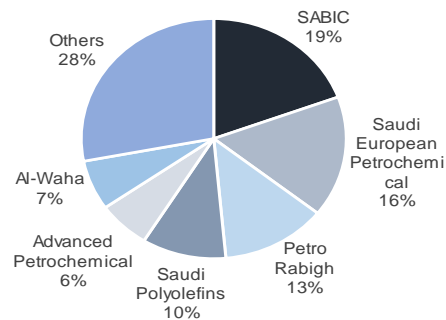
Source: Company reports, EMS

**FIG 12: SABIC'S MARKET SHARE - ETHYLENE**



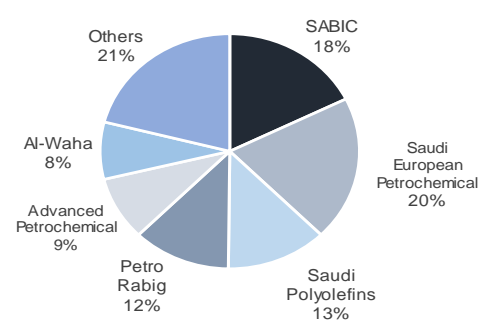
Source: Company reports, EMS

**FIG 13: SABIC'S MARKET SHARE - PROPYLENE**



Source: Company reports, EMS

**FIG 14: SABIC'S MARKET SHARE - POLYPROPYLENE**



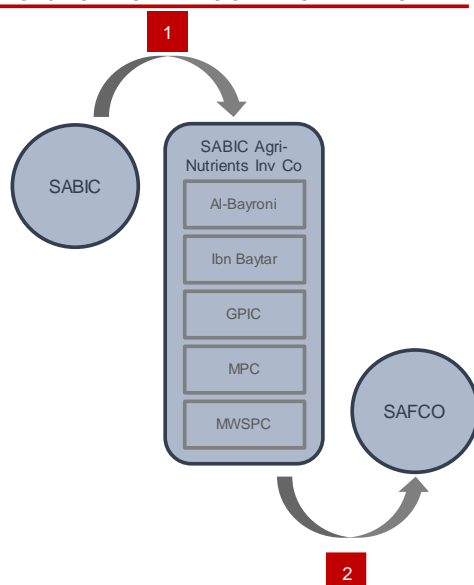
Source: Company reports, EMS

### SABIC Today

In recent years, SABIC further streamlined SBUs into Petrochemicals, Agri-Nutrients and Metals. The company is pursuing further consolidation of businesses, for example the agri-nutrients portfolio will consist of SAFCO along with investments in Ma'aden's phosphate projects. In March, SABIC announced intention to merge SADAF and Arabian Petrochemical Company (PETROKEMYA).



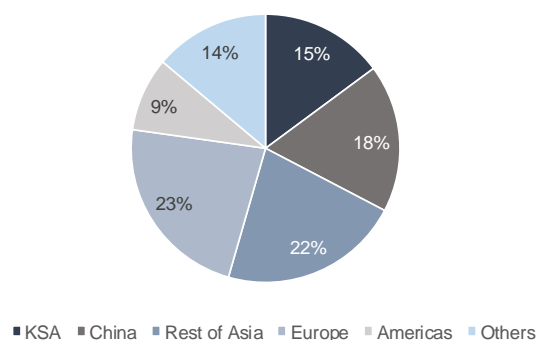
FIG 15: AGRI-NUTRIENTS OWNERSHIP TRANSFER



Source: Company Reports

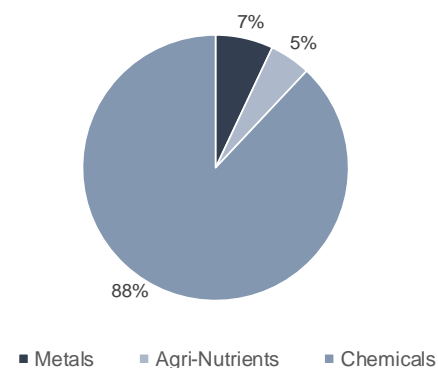
In 2018, chemicals consisted 88% of sales. In terms of geographic distribution China and Europe are the largest destinations for SABIC's products. SABIC is considering plans to build a petrochemical complex in the Chinese province of Fujian as part of wider efforts to diversify its business internationally. It has signed a preliminary agreement with the Fujian provincial government which sets out an outline for cooperation in the project. The expansion in China also serves in securing future demand for the Kingdom's crude oil supply. SABIC has already established a foothold in China through its existing joint venture with the Chinese state-owned oil company Sinopec in an ethylene plant in the Tianjin Province.

FIG 16: GEOGRAPHICAL BREAKDOWN OF SALES



Source: Company Reports

FIG 17: SEGMENTAL BREAKDOWN OF SALES



Source: Company Reports

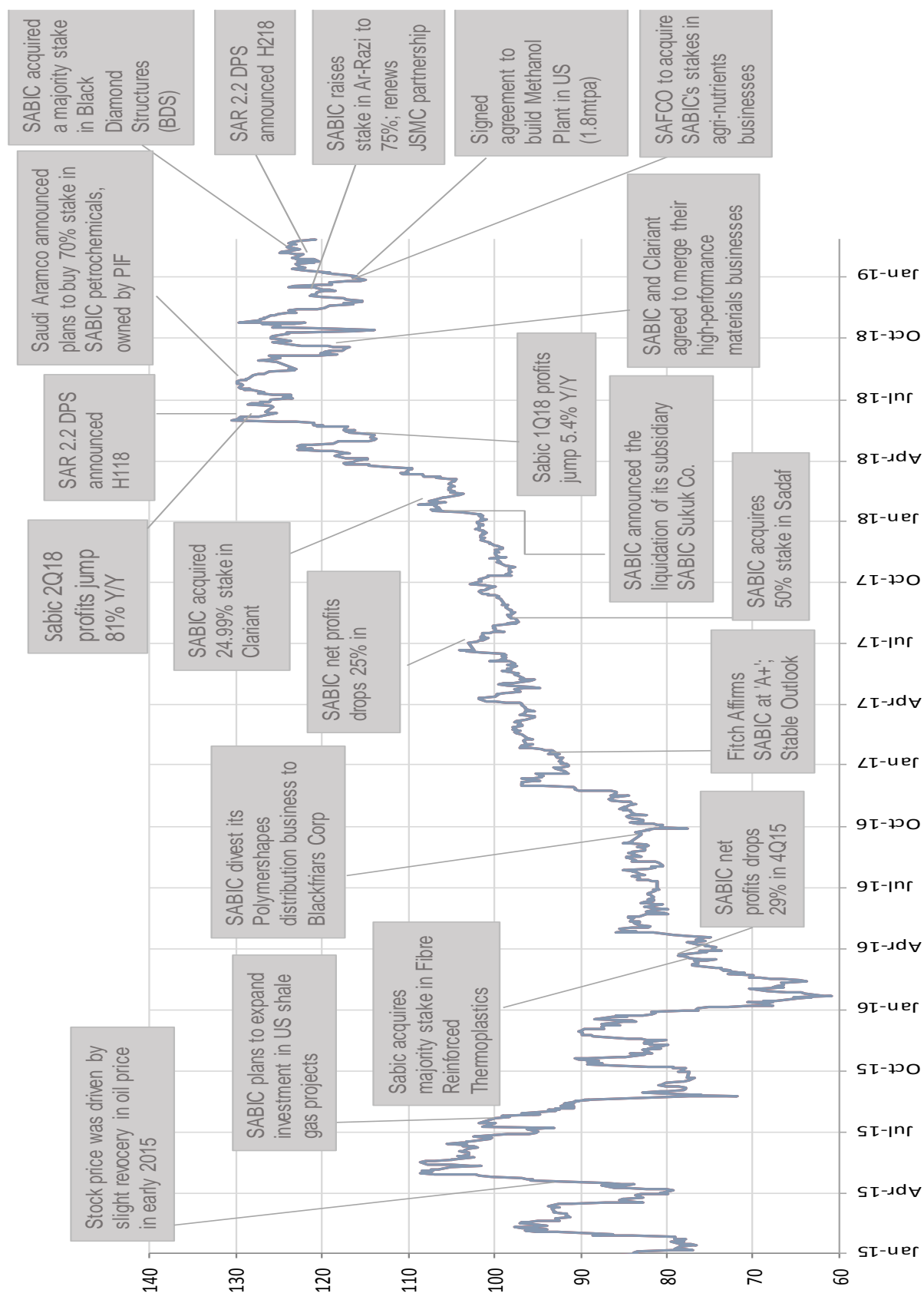
### Main Products

SABIC's feedstock mix consists of ethane (39%), propane (30%), butane (22%), NGLs (7%) and naphtha (2%). Main products produced include: polyethylene, polypropylene, MTBE, methanol and glycols. End uses for SABIC's products include: plastics, adhesives and additives. Polyethylene and polypropylene comprise 23% and 53% of chemicals SBU revenues, respectively.





FIG 18: SABIC'S PRICE PERFORMANCE



Source: Company Reports



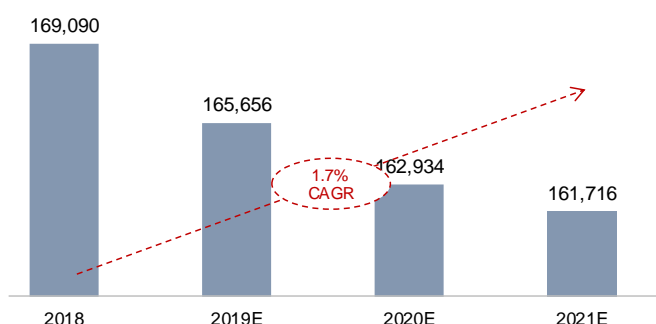
## Financial Analysis

In setting our forecasts for SABIC, we assume a steady increase in production reflecting the current and future capital expenditure projects, reaching 92.8MMT in 2025 from 74.7MMT in 2018. More importantly, sales volume is assumed to increase from 49MMT to 62MMT during those years. We also incorporate further subsidy cuts on feedstocks (ethane and methane) into our model, ultimately reflecting market prices.

### Topline driven by petrochemicals

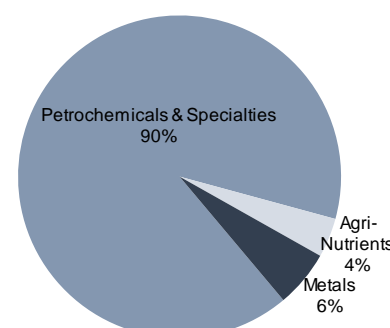
Petrochemicals make up around 88% of SABIC's sales, and hence its topline is mostly affected by these products. Going forward, increase in total production is expected to be offset by a decrease in SABIC's average selling price of petrochemical products, resulting in a modest increase in topline.

FIG 19: REVENUE FORECAST (SAR MN)



Source: Company Reports

FIG 20: SEGMENT BREAKDOWN



Source: Company Reports

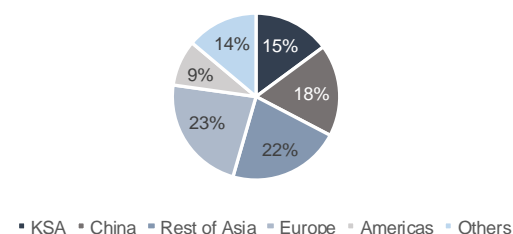
In 2018, revenues increased to SAR 169bn (+13% Y/Y), reflecting the sharp improvement in oil price during the year. The drop in oil price at the end of 2018, along with the expectations for the price to stay near USD 65/bbl during 2019 will influence product prices for the year, and thus the slight increase in topline to SAR 170bn (+0.74% Y/Y). It is also important to highlight that Europe, the U.S. and China account for 55% of SABIC's sales, and the expected decrease in GDP growth for the three countries, along with the rising trade tensions, will be a significant factor in moderating revenues through 2021.

TABLE 3: GDP GROWTH FORECAST

	2018	2019E	2020E	2021E
China	6.5	6.2	6.2	6.0
US	2.9	2.5	1.7	1.6
Europe	1.9	1.6	1.5	1.3
KSA	2.0	2.1	2.2	2.2

Source: World Bank

FIG 21: GEOGRAPHICAL BREAKDOWN OF SALE



Source: Company Reports

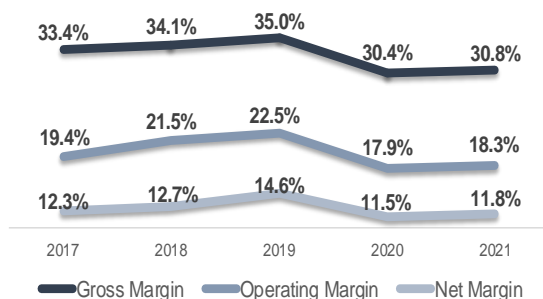
### Further subsidy cuts to affect margins

SABIC has a significant advantage as a result of a highly competitive position reinforced by economies of scale and vertical integration. Consequently, despite government increase in feedstock prices effective beginning 2016, SABIC is still able to endure sector downturns. Nevertheless, further subsidy cuts that are expected to take place in 2020 for two of the company's main feedstocks (ethane and methane) will have a significant effect on the company's gross margin, especially since a major portion of the company's cost



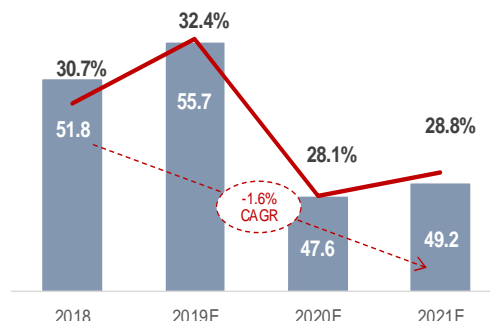
of production (60%-70%) is related to feedstock. In the presence of a highly competitive environment, it is unlikely that SABIC will be able to pass on this increase to customers and would have to absorb, ultimately negatively affecting margins.

FIG 22: MARGINS FORECAST



Source: SFC

FIG 23: EBITDA (SAR BN) AND MARGINS (%)



Source: SFC

### Capex to increase

SABIC undertook a large capital spending program through 2011, spending around SAR 115bn to support new production facilities such as Sharq, Yansab and Saudi Kayan. SABIC had a total production of 71MMT in 2017, accounting for an almost full utilization of its production plants in Saudi Arabia, which offset average utilization in other locations. We expect capital expenditure as a percentage of sales to increase from 7% to 8% in 2017 and 2018 to around 12% in 2019 and 2020, due to projects such as COTC with Saudi Aramco.

### Stable debt level

The discussed capital expenditures are expected to be mostly funded with internally generated cash, resulting in flat debt going forward. This might change if further capex is planned, or if SABIC decided to integrate some changes to its capital structure. Even though SABIC maintains a high dividend payout ratio, it has significantly reduced its gross debt since 2012. Net debt to EBITDA was at a low of 0.1x at the end of 2018, compared to 1x in 2012. The low net debt level reflects a healthy cash position of SAR 52bn compared to SAR 63bn (SAR 58bn of debt) at the end of 2017. Even with a more conservative petrochemical cycle, SABIC should be able to sustain financial flexibility going forward.

### Disappointing 1Q19 results

SABIC's 1Q19 results were disappointing. Total revenues of SAR 37.4bn fell -11% Y/Y and -7% Q/Q, but earnings dropped to SAR 3.4bn, a decline of -38% Y/Y, widely missing consensus. Nevertheless, these earnings represented a +5% gain Q/Q. In terms of volume, 1Q19 witnessed the highest turnover compared to the previous four quarters, but the decline in petchem prices was the major reason for this slump in net profit. Historically, SABIC achieves the highest earnings in Q2 and Q3, so there still is room to make up for the weak 1Q19 results through the end of FY19.



## Valuation

We applied a blended approach in our valuation for SABIC: discounted cash flow and relative valuation (EV/EBITDA).

### Discounted Cash flow

In our DCF approach, we assume 12-88 debt-equity split, which reflects the current capital structure of SABIC. Cost of equity is calculated at 9.8% and cost of debt is 4.5%, which yields a WACC of 9.2%. In calculating the terminal value, we forecast a long-term growth rate of 2.5%. The DCF approach ascribes a fair value per share of SAR 131.

TABLE 4: DCF VALUATION

DCF (SAR mn)	2019E	2020E	2021E	2022E	2023E	2024E	2025E	Assumptions
EBIT	37,354	29,119	29,577	30,452	28,355	29,069	33,869	Risk free rate 3.5%
+ Depreciation & amort	17,158	17,516	17,799	17,833	17,529	17,233	16,945	LT growth rate 2.5%
- Zakat	3,963	4,100	4,182	4,304	3,986	4,117	4,811	Beta 0.96
- Working capital changes	(3,907)	(1,600)	(38)	1,159	(60)	669	3,916	Equity risk premium 6.58%
- Capex	19,654	19,212	16,957	13,566	13,294	13,028	12,768	Cost of equity 9.8%
<b>FCFF</b>	<b>34,801</b>	<b>24,922</b>	<b>26,275</b>	<b>29,257</b>	<b>28,664</b>	<b>28,488</b>	<b>29,319</b>	Cost of debt 4.5%
PV of FCFF	147,724							% Debt 12%
PV of terminal value	248,505							% Equity 88%
Enterprise value	396,229							WACC 9.2%
Net debt	4,421							
Equity value	391,808							
Shares outstanding (mn)	3,000							
Value per share (SAR)								

Source: SFC

SABIC is trading at a P/E of 17x, which is above the average of local and global peers P/E of 14x, and is justified by its superior gross, EBITDA, operating and net margins. A big factor contributing to these significant superior margins is the subsidized price of some of the feedstocks, so if the government completely lifts its subsidy on these feedstocks, SABIC's margins are expected to normalize and eventually align with those of its peers.

TABLE 5: COMPS TRADING MULTIPLES

Company	BBG Symbol	Country	MKT Cap (USD mn)	P/E			EV/EBITDA			EV/Sales			P/B		
				2018E	2019E	2020E	2018E	2019E	2020E	2018E	2019E	2020E	2018E	2019E	2020E
LyondellBasell Industries N.V.	LYB US	UK	33,413	7.5x	8.0x	7.0x	5.7x	5.9x	5.5x	1.0x	1.0x	1.0x	3.1x	2.5x	2.2x
LG Chem, Ltd.	051910 KS	South Korea	24,786	15.9x	13.0x	14.8x	7.2x	6.2x	6.4x	1.0x	0.8x	0.8x	1.5x	1.4x	1.3x
Formosa Chemicals & Fibre Corporation	1326 TT	Taiwan	20,066	11.9x	13.1x	13.4x	11.1x	12.3x	12.4x	1.6x	1.7x	1.7x	1.7x	1.7x	1.6x
PETRONAS Chemicals Group Berhad	PCHEM MK	Malaysia	16,470	14.6x	15.0x	13.7x	8.4x	8.6x	7.9x	3.1x	3.1x	2.7x	2.3x	2.1x	1.9x
Braskem S.A.	BRKM5 BZ	Brazil	10,505	17.1x	11.5x	13.2x	6.0x	6.4x	6.6x	1.2x	1.2x	1.2x	5.3x	3.6x	3.0x
Rongsheng Petrochemical Co., Ltd.	002493 CH	China	10,044	27.3x	12.4x	9.5x	21.7x	7.7x	5.6x	1.4x	0.8x	0.6x	3.0x	2.5x	2.0x
PT. Chandra Asri Petrochemical Tbk	TPIA UJ	Indonesia	7,217	33.4x	28.9x	29.5x	16.2x	15.6x	14.6x	2.8x	2.9x	2.7x	3.9x	3.5x	3.2x
Yanbu National Petrochemical Company	YANSAB AB	KSA	10,065	14.9x	16.4x	16.2x	10.5x	11.1x	11.4x	4.8x	4.9x	5.1x	2.1x	2.2x	2.1x
Saudi Kayan Petrochemical Company	KAYAN AB	KSA	5,376	12.6x	13.1x	12.4x	7.8x	7.9x	7.7x	3.3x	3.2x	3.1x	1.1x	1.1x	1.1x
National Petrochemical Company	PETROCH AB	KSA	3,430	11.6x	11.4x	12.0x	7.2x	7.2x	7.4x	2.4x	2.4x	2.6x	1.5x	1.4x	1.5x
Advanced Petrochemical Company	APPC AB	KSA	2,886	14.9x	13.4x	14.9x	12.3x	11.5x	12.2x	4.2x	3.9x	4.0x	3.2x	3.1x	3.0x
National Industrialization Company	NIC AB	KSA	2,833	8.1x	9.6x	11.8x	7.3x	7.8x	8.5x	2.2x	2.3x	2.5x	1.1x	1.0x	0.9x
Saudi Industrial Investment Group	SIIG AB	KSA	2,820	9.3x	8.9x	8.9x	7.3x	7.3x	7.3x	2.7x	2.6x	2.6x	1.4x	1.3x	1.3x
Korea Petrochemical Ind. Co., Ltd.	006650 KS	South Korea	945	4.9x	4.7x	na	2.8x	2.8x	3.2x	0.5x	0.4x	0.5x	0.6x	0.5x	na
Westlake Chemical Partners LP	WLKP US	US	748	14.6x	12.1x	10.8x	3.6x	3.6x	3.6x	1.4x	1.3x	1.2x	3.4x	2.6x	2.1x
Trecora Resources	TREC US	US	209	44.4x	11.7x	na	12.4x	7.3x	na	1.1x	1.0x	na	1.1x	1.0x	na
<b>Median</b>				<b>14.6x</b>	<b>12.2x</b>	<b>12.8x</b>	<b>7.6x</b>	<b>7.5x</b>	<b>7.4x</b>	<b>1.9x</b>	<b>2.0x</b>	<b>2.5x</b>	<b>1.9x</b>	<b>1.9x</b>	<b>2.0x</b>
<b>Saudi Basic Industries Corporation</b>	<b>SABIC AB</b>	<b>Saudi Arabia</b>	<b>96,000</b>	<b>16.7x</b>	<b>14.9x</b>	<b>19.3x</b>	<b>7.0x</b>	<b>6.8x</b>	<b>8.0x</b>	<b>2.1x</b>	<b>2.2x</b>	<b>2.2x</b>	<b>2.1x</b>	<b>2.0x</b>	<b>2.0x</b>

Source: Bloomberg, SFC



### Relative Valuation

We forecast EBITDA of SAR 56bn for 2019 and multiply it by industry average EV/EBITDA of 7.2x to come up with an equity value (after adjusting for net debt) of SAR 386bn, or SAR 129 per share.

TABLE 6: COMPS MARGINS AND RETURNS

Company	Gross Margin			EBITDA Margin			Net Margin			ROE		
	2018E	2019E	2020E	2018E	2019E	2020E	2018E	2019E	2020E	2018E	2019E	2020E
LyondellBasell Industries N.V.	17.6%	16.3%	18.2%	18.0%	16.9%	17.3%	12.2%	10.3%	12.0%	17.3%	15.1%	14.5%
LG Chem, Ltd.	17.5%	17.4%	17.9%	13.3%	13.4%	12.6%	5.6%	5.8%	6.2%	6.2%	7.0%	6.2%
Formosa Chemicals & Fibre Corporation	14.4%	13.1%	12.8%	14.3%	13.8%	14.0%	12.9%	11.9%	11.8%	9.6%	8.4%	7.8%
PETRONAS Chemicals Group Berhad	40.9%	40.4%	37.5%	37.1%	36.4%	34.6%	25.0%	23.8%	23.1%	13.4%	11.6%	11.3%
Braskem S.A.	20.8%	18.6%	16.5%	20.5%	18.8%	17.7%	5.5%	4.4%	6.7%	48.5%	31.3%	20.2%
Rongsheng Petrochemical Co., Ltd.	7.1%	11.7%	12.6%	6.6%	10.2%	10.8%	2.9%	3.7%	3.6%	3.3%	4.9%	6.2%
PT. Chandra Asri Petrochemical Tbk	17.4%	19.1%	21.0%	17.0%	18.4%	18.8%	8.4%	9.8%	9.1%	9.3%	9.7%	9.0%
Yanbu National Petrochemical Company	38.8%	35.1%	33.5%	46.1%	44.1%	44.4%	35.5%	30.6%	31.8%	11.3%	10.8%	10.4%
Saudi Kayan Petrochemical Company	28.1%	24.7%	24.7%	42.6%	41.0%	39.7%	14.9%	11.5%	12.9%	4.3%	3.5%	3.5%
National Petrochemical Company	31.5%	31.5%	na	35.4%	35.4%	35.4%	13.2%	13.4%	13.1%	16.1%	14.2%	13.0%
Advanced Petrochemical Company	30.1%	30.1%	28.6%	33.8%	34.3%	33.0%	26.6%	30.2%	26.9%	15.5%	16.3%	15.0%
National Industrialization Company	28.1%	26.7%	19.0%	30.6%	29.4%	29.7%	10.2%	10.0%	8.9%	14.4%	10.8%	8.1%
Saudi Industrial Investment Group	na	na	na	37.4%	35.4%	35.4%	15.7%	14.9%	14.2%	18.2%	18.7%	16.1%
Korea Petrochemical Ind. Co., Ltd.	15.1%	14.1%	14.8%	16.6%	15.8%	14.3%	9.6%	9.4%	9.7%	9.9%	9.0%	na
Westlake Chemical Partners LP	31.8%	28.4%	28.6%	37.9%	34.7%	34.2%	4.3%	5.8%	7.1%	23.2%	23.9%	24.4%
Trecora Resources	12.0%	16.4%	na	8.7%	13.4%	na	1.7%	5.8%	na	1.8%	7.0%	na
<b>Median</b>	<b>20.8%</b>	<b>19.1%</b>	<b>19.0%</b>	<b>25.5%</b>	<b>24.1%</b>	<b>29.7%</b>	<b>11.2%</b>	<b>10.1%</b>	<b>11.8%</b>	<b>12.3%</b>	<b>10.8%</b>	<b>10.8%</b>
<b>Saudi Basic Industries Corporation</b>	<b>34.1%</b>	<b>35.0%</b>	<b>30.4%</b>	<b>30.7%</b>	<b>32.4%</b>	<b>28.1%</b>	<b>12.7%</b>	<b>14.6%</b>	<b>11.5%</b>	<b>12.4%</b>	<b>13.3%</b>	<b>10.1%</b>

Source: Bloomberg, SFC



## Recommendation and Conclusion

We initiate coverage on Saudi Basic Industries Corp (SABIC) with a Hold recommendation and SAR 130, 12-month target price. On valuation multiples the stock trades 14.9x 2019E P/E versus group median 12.2x, which in our view is justified considering substantial margin outperformance.

Key highlights for SABIC include efficient and stable business especially with its very moderate debt and increased support from the Saudi government towards the petrochemical sector. High and resilient profitability is mostly due to the fact that prices of feedstock needed for the company's production process are still at an advantage compared to international peers, but this is expected to change going forward. Considerable capex plans are expected for the forthcoming years due to acquisitions and new production plants, but cash flow is still expected to be strong.

SABIC bears exposure to the cyclical petrochemical and steel industries as well as to the volatile oil and gas prices. However, the company's plans in expanding both organically and through acquisitions, as well as in diversifying into more value added and stable products, should keep the company's financials strong going forward. Moreover, Aramco's acquisition of PIF's 70 percent stake in SABIC can help the company expand its operations in Saudi Arabia and potentially support it when it comes to the purchase as well as the price of feedstock.





## Summary Financials

SAR mln, ending Dec-31<sup>st</sup>

Income Statement	2018	2019E	2020E	2021E
Sales	169,090	165,656	162,934	161,716
Cost of sales	(111,431)	(107,595)	(113,448)	(111,925)
Gross profit	57,659	58,061	49,485	49,792
G&A	(21,331)	(20,707)	(20,367)	(20,215)
Operating income	36,328	37,354	29,119	29,577
Associates & JVs	1,056	1,868	1,456	1,479
Net finance cost	(1,212)	(1,030)	(1,075)	(965)
Other income	(438)	1,121	874	887
Non-controlling interest	(10,394)	(9,828)	(7,593)	(7,745)
Zakat & income tax	(3,796)	(5,307)	(4,100)	(4,182)
Net income	21,543	24,177	18,679	19,052
Shares outstanding (mln)	3,000	3,000	3,000	3,000
EPS (SAR)	7.18	8.06	6.23	6.35
EBITDA	51,887	53,733	45,825	46,534
DPS (SAR)	4.40	5.00	5.50	5.50

CAGR	
2015-18	2018-21E
5%	(1%)
10%	(5%)
8%	(7%)
5%	(4%)
5%	(4%)

1Q19E	1Q18	Y/Y Chg	4Q18	Q/Q Chg
42,699	41,862	2.0%	40,129	6.4%
(28,139)	(27,648)		(27,889)	
14,560	14,213	2.4%	12,240	19.0%
(5,386)	(5,269)		(5,740)	
9,174	8,945	2.6%	6,501	41.1%
459	366		32	
353	(268)		(325)	
275	25		(154)	
(2,565)	6,867		(1,976)	
(1,153)	(1,359)		(836)	
6,542	5,508	18.8%	3,242	101.8%
3,000	3,000		3,000	
2.2	1.8		1.1	
13,268	12,600	5.3%	10,510	26.2%

Balance Sheet	2018	2019E	2020E	2021E
Cash & equivalents	52,387	76,412	77,459	81,157
Inventories	28,183	27,212	28,693	28,308
Trade receivables	21,568	22,038	22,569	23,286
Other current items	5,841	5,723	4,888	4,851
Current assets	107,979	131,385	133,609	137,602
PP&E	163,787	167,063	169,569	169,569
Investments	25,803	25,000	25,000	25,000
Other non-assets	22,555	19,502	20,042	20,603
Total assets	320,124	342,949	348,219	352,775
Payables	18,693	17,527	18,892	18,335
ST debt	4,918	12,000	13,000	15,000
Other current items	13,799	18,252	19,664	20,554
Current liabilities	37,410	47,780	51,556	53,890
LT debt	42,425	42,000	42,000	42,000
Other non-current liabilities	18,839	20,409	20,164	20,054
Total liabilities	98,674	110,189	113,721	115,944
Total equity	221,450	232,760	234,499	236,831
Total liabilities & equity	320,124	342,949	348,219	352,775

CAGR	
2015-18	2018-21E
4%	16%
(3%)	8%
(1%)	3%
(4%)	13%
(6%)	6%
2%	2%
(1%)	3%

Growth (Y/Y)	2018	2019E	2020E	2021E
Sales	12.9%	-2.0%	-1.6%	-0.7%
EBITDA	20.9%	3.6%	-14.7%	1.5%
EBIT	25.3%	2.8%	-22.0%	1.6%
Net income	16.9%	12.2%	-22.7%	2.0%

Margins	2018	2019E	2020E	2021E
Gross	34.1%	35.0%	30.4%	30.8%
EBITDA	30.7%	32.4%	28.1%	28.8%
EBIT	21.5%	22.5%	17.9%	18.3%
Net	12.7%	14.6%	11.5%	11.8%

Ratios	2018	2019E	2020E	2021E
Current	2.9x	2.7x	2.6x	2.6x
ROA	6.7%	7.0%	5.4%	5.4%
ROE	12.4%	13.3%	10.1%	10.2%
Payout	61.3%	62.0%	88.3%	86.6%
CCC	78	81	82	84
D / E	0.2x	0.2x	0.2x	0.2x
Net debt / EBITDA	0.1x	-0.2x	-0.3x	-0.2x

Statement of Cashflows	2018	2019E	2020E	2021E
Income before zakat & tax	35,733	29,484	22,780	23,234
Non-cash items	17,125	26,408	24,989	25,290
Working capital changes	(1,841)	4,133	1,355	(72)
Other items	(5,989)	(5,253)	(5,435)	(5,407)
Cash from operations	45,028	54,772	43,688	43,045
Purchase of PP&E	(14,499)	(19,654)	(19,212)	(16,957)
Other investing activities	(15,012)	4,410	106	(4,925)
Cash from investing	(29,511)	(15,244)	(19,106)	(21,882)
Net dividends	(20,833)	(22,695)	(24,534)	(24,464)
Debt (payments) / proceeds	(10,904)	6,658	1,000	2,000
Cash from financing	(31,737)	(16,037)	(23,534)	(22,464)
Change in cash	(16,220)	23,490	1,047	(1,302)
Beginning cash	57,974	42,921	66,412	67,459
Ending cash	41,754	66,412	67,459	66,157

CAGR	
2015-18	2018-21E
(6%)	(1%)
32%	(9%)
(4%)	(11%)

Valuation	2018	2019E	2020E	2021E
P / E	16.7x	14.9x	19.3x	18.9x
EV / EBITDA	7.0x	6.8x	8.0x	7.8x
P / S	2.1x	2.2x	2.2x	2.2x
P / B	2.1x	2.0x	2.0x	1.9x

### DCF Valuation Summary (SAR)

WACC	9.2%
Enterprise value (SAR mln)	396,092
Equity value (SAR mln)	391,671
Fair value per share	131



## MEG Price Weakness to Persist

Yanbu National Petrochemical Co. (Yansab) is an affiliate of SABIC, which owns 51% of the company. Yansab is SABIC's largest petrochemical complex, and engages in the production of numerous petrochemical products such as polypropylene, polyethylene, butene and ethylene glycol.

### Strong balance sheet

Yansab started paying down its debt in 2012, and ultimately having zero leverage by 2017. This is a great advantage for the company as not only would it have an enhanced cash flow, reduced volatility in earnings and resilience to fluctuating product prices, but it would also give it flexibility in case it would need financing for any expansion projects going forward.

### Negative outlook for MEG

Monoethylene glycol (MEG) is Yansab's major end product, accounting for around 35% of its sales. According to IHS Markit, more global MEG capacities are coming on stream in 2019, and the increase in supply (6.8%) is to comfortably exceed that of demand (4%) in the forthcoming years, exerting downward pressure on price. As such, the downward trend we witnessed in the second half of 2018 is expected to persist.

### Export oriented

Yansab is considered to be an export oriented company, with more than 80% of its sales taking place outside of KSA. This results in the company being more exposed to the international economic conditions in general, and specifically to major economies such as China and the US.

### Initiate with Hold and SAR 73 target price

We applied DCF and relative Valuation blended approach to value Yansab. For DCF, we assume capital structure with 100% equity and cost of equity (WACC) of 8.5%. We arrive at a fair value of SAR 73 per share, equating to 14.3x 2019E P/E versus 12.2x for global peers. In our view, the premium is justified considering substantially higher margins Yansab commands relative to peers.

Rating Summary	
Recommendation	Hold
12-Month Target Price (SAR)	73
Upside / (Downside)	5.9%
Dividend Yield	5.4%
Expected Total Return	11.3%

Stock Details (SAR)	
Last Close Price	68.90
Market Capitalization (mn)	38,756
Shares Outstanding (mn)	562.5
52-Week High / Low	77.50 / 58.00
Price Change (YTD)	2.9%
12-Mth ADTV (000s)	412
Reuters / Bloomberg	2290.SE / YANSAB AB

	2018	2019E	2020E
Revenue (mn)	7,629	7,464	7,887
EBITDA (mn)	3,452	3,739	3,691
EPS	4.29	4.80	4.82
DPS	3.25	3.75	3.75

Key Shareholders	
SABIC	51%
GOSI	12%
Free Float	37%

Price Multiples			
	2018	2019E	2020E
P / E	16.1x	14.3x	16.7x
EV / EBITDA	10.7x	10.0x	11.4x
P / S	5.1x	5.1x	5.1x
P / B	2.2x	2.2x	2.1x



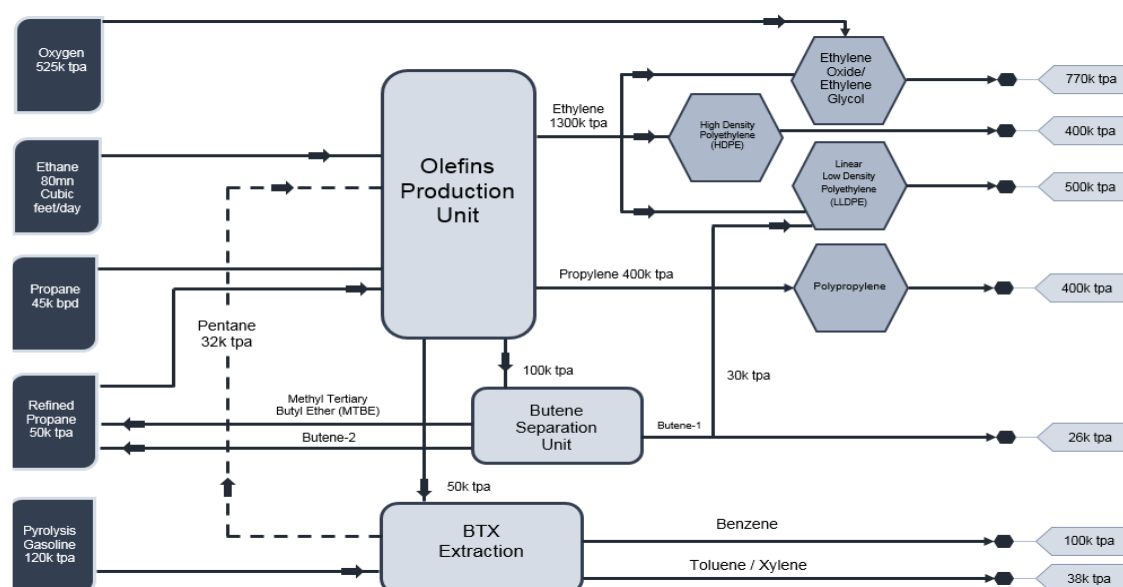
Source: Bloomberg, Tadawul



## Company Background

Yanbu National Petrochemical Company (Yansab) is an affiliate of SABIC, which owns 51% of the company. It was set up in 2005, with the IPO taking place in January 2006 and production commencing in March 2010. Yansab operates SABIC's largest petrochemical complex. It has an annual capacity of more than 4 MT of petrochemicals that includes polyethylene, polypropylene and monoethylene glycol, among other products.

FIG 24: YANSAB PRODUCTION PROCESS



Source: Argam

Yansab has a strong balance sheet. It started paying down debt from 2013, and entirely deleveraged by 2017, resulting in net cash position. Moreover, the company has maintained a net profit margin above 30% for the past 3 years, and has surpassed most of its Saudi peers in gross, operating, EBITDA and net margins.

TABLE 7: LTM MARGINS COMPARISON

	Margins				ROA	ROE
	Gross	EBITDA	EBIT	Net		
SABIC	34.1%	30.7%	21.5%	12.7%	14.8%	7.1%
Kayan	27.4%	40.2%	21.7%	13.9%	11.5%	4.1%
Petrochem	20.5%	72.0%	21.0%	10.8%	2.2%	1.3%
Advanced	29.1%	32.2%	24.5%	24.9%	20.8%	8.7%
TASNEE	27.4%	18.3%	11.7%	11.6%	14.8%	2.5%
SIIG	33.8%	35.9%	26.0%	13.9%	18.2%	5.7%
Average	28.7%	38.2%	21.1%	14.6%	13.7%	4.9%
YANSAB	37.6%	45.3%	31.0%	31.6%	12.7%	14.0%

Source: Company Reports, Bloomberg

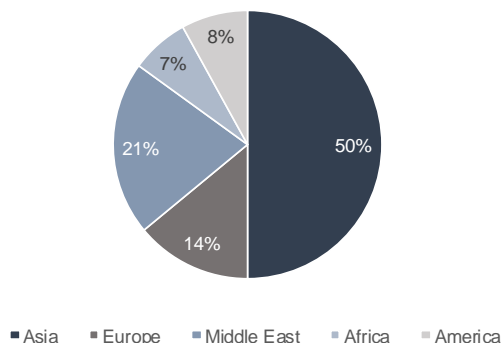
The company's modest increase in earnings in the past year was mainly due to the fact that sales volume decreased because of the shutdown of the ethylene glycol plant that took place in 4Q18. The reason for this shutdown was for regular maintenance as well as an expansion project which will increase capacity going forward.

Monoethylene Glycol (MEG) is Yansab's main product, the price of which has been steadily decreasing since the beginning of 3Q18. According to IHS Markit, in addition to the new capacity to be added by Yansab, MEG capacity is set to increase internationally in the forthcoming years, resulting in growth of

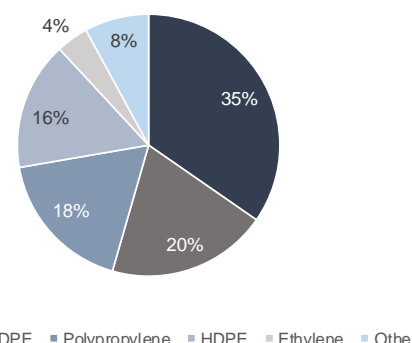


supply of the product outpacing demand. Moreover, Yansab exports a significant part of its products to China, which is continuing trade negotiations with the US.

**FIG 25: GEOGRAPHICAL BREAKDOWN OF SALES** **FIG 26: SALES BREAKDOWN BY PRODUCT**



Source: Company Reports



Source: Company Reports

## Valuation

We applied a blended approach in our valuation for Yansab: discounted cash flow and relative valuation (EV/EBITDA).

### Discounted Cash flow

In our DCF approach, we assume a capital structure of 100% equity, which reflects the current capital structure for Yansab. Cost of equity and WACC is calculated at 8.5%. In calculating the terminal value, we forecast a long-term growth rate of 2.5%. The DCF approach ascribes a fair value per share of SAR 71.

**TABLE 8: DCF VALUATION**

DCF (SAR mn)	2019E	2020E	2021E	2022E	2023E	2024E	2025E	Assumptions	
EBIT	2,611	2,227	2,237	2,232	1,911	1,922	1,932	Risk free rate	3.5%
+ Depreciation & amort	1,077	1,018	957	895	837	783	732	LT growth rate	2.5%
- Zakat	96	82	82	82	71	71	72	Beta	0.76
- Working capital changes	(433)	(95)	92	(11)	0	20	8	Equity risk premium	6.58%
- Capex	379	298	224	210	196	183	171	Cost of equity	8.5%
<b>FCFF</b>	<b>3,646</b>	<b>2,959</b>	<b>2,796</b>	<b>2,847</b>	<b>2,480</b>	<b>2,430</b>	<b>2,413</b>	Cost of debt	0.0%
PV of FCFF	14,619							% Debt	0%
PV of terminal value	23,283							% Equity	100%
Enterprise value	37,903							WACC	8.5%
Net debt	(1,776)								
Equity value	39,678								
Shares outstanding (mn)	563								
Value per share (SAR)	<b>71</b>								

Source: SFC

### Relative Valuation

We forecast EBITDA of SAR 3,688mn for 2019 and multiply it by industry average EV/EBITDA of 7.2x to come up with an equity value (after adjusting for net cash) of SAR 43.6bn, or SAR 78 per share.



TABLE 9: COMPS TRADING MULTIPLES

Company	BBG Symbol	Country	MKT Cap (USD mn)	P/E			EV/EBITDA			EV/SALES			P/B		
				2018E	2019E	2020E	2018E	2019E	2020E	2018E	2019E	2020E	2018E	2019E	2020E
LyondellBasell Industries N.V.	LYB US	UK	33,413	7.5x	8.0x	7.0x	5.7x	5.9x	5.5x	1.0x	1.0x	1.0x	3.1x	2.5x	2.2x
LG Chem, Ltd.	051910 KS	South Korea	24,786	15.9x	13.0x	14.8x	7.2x	6.2x	6.4x	1.0x	0.8x	0.8x	1.5x	1.4x	1.3x
Formosa Chemicals and Fibre Corp	1326 TT	Taiwan	20,066	11.9x	13.1x	13.4x	11.1x	12.3x	12.4x	1.6x	1.7x	1.7x	1.7x	1.7x	1.6x
PETRONAS Chemicals Group Berhad	PCHM MK	Malaysia	16,470	14.6x	15.0x	13.7x	8.4x	8.6x	7.9x	3.1x	3.1x	2.7x	2.3x	2.1x	1.9x
Braskem S.A.	BRKM5 BZ	Brazil	10,505	17.1x	11.5x	13.2x	6.0x	6.4x	6.6x	1.2x	1.2x	1.2x	5.3x	3.6x	3.0x
Rongsheng Petrochemical Co., Ltd.	002493 CH	China	10,044	27.3x	12.4x	9.5x	21.7x	7.7x	5.6x	1.4x	0.8x	0.6x	3.0x	2.5x	2.0x
PT. Chandra Asri Petrochemical Tbk	TPIA JJ	Indonesia	7,217	33.4x	28.9x	29.5x	16.2x	15.6x	14.6x	2.8x	2.9x	2.7x	3.9x	3.5x	3.2x
Saudi Basic Industries Corporation	SABIC AB	KSA	98,238	16.2x	16.1x	15.8x	7.3x	7.5x	7.9x	2.3x	2.5x	2.5x	2.0x	2.0x	1.9x
Saudi Kayan Petrochemical Company	KAYAN AB	KSA	5,376	12.6x	13.1x	12.4x	7.8x	7.9x	7.7x	3.3x	3.2x	3.1x	1.1x	1.1x	1.1x
National Petrochemical Company	PETROCH AI	KSA	3,430	11.6x	11.4x	12.0x	7.2x	7.2x	7.4x	2.4x	2.4x	2.6x	1.5x	1.4x	1.5x
Advanced Petrochemical Company	APPC AB	KSA	2,886	14.9x	13.4x	14.9x	12.3x	11.5x	12.2x	4.2x	3.9x	4.0x	3.2x	3.1x	3.0x
National Industrialization Company	NIC AB	KSA	2,833	8.1x	9.6x	11.8x	7.3x	7.8x	8.5x	2.2x	2.3x	2.5x	1.1x	1.0x	0.9x
Saudi Industrial Investment Group	SIIG AB	KSA	2,820	9.3x	8.9x	8.9x	7.3x	7.3x	7.3x	2.7x	2.6x	2.6x	1.4x	1.3x	1.3x
Korea Petrochemical Ind. Co., Ltd.	006650 KS	South Korea	945	4.9x	4.7x	na	2.8x	2.8x	3.2x	0.5x	0.4x	0.5x	0.6x	0.5x	na
Westlake Chemical Partners LP	WLKP US	US	748	14.6x	12.1x	10.8x	3.6x	3.6x	3.6x	1.4x	1.3x	1.2x	3.4x	2.6x	2.1x
Trecora Resources	TREC US	US	209	44.4x	11.7x	na	12.4x	7.3x	na	1.1x	1.0x	na	1.1x	1.0x	na
<b>Median</b>				<b>14.6x</b>	<b>12.2x</b>	<b>12.8x</b>	<b>7.3x</b>	<b>7.4x</b>	<b>7.4x</b>	<b>1.9x</b>	<b>2.0x</b>	<b>2.5x</b>	<b>1.8x</b>	<b>1.8x</b>	<b>1.9x</b>
<b>Yanbu National Petrochemical Co. YANSAB AB Saudi Arabi</b>				<b>10,065</b>	<b>16.1x</b>	<b>14.3x</b>	<b>16.7x</b>	<b>10.7x</b>	<b>10.0x</b>	<b>11.4x</b>	<b>4.8x</b>	<b>4.9x</b>	<b>4.9x</b>	<b>2.2x</b>	<b>2.1x</b>

Source: Bloomberg, SFC

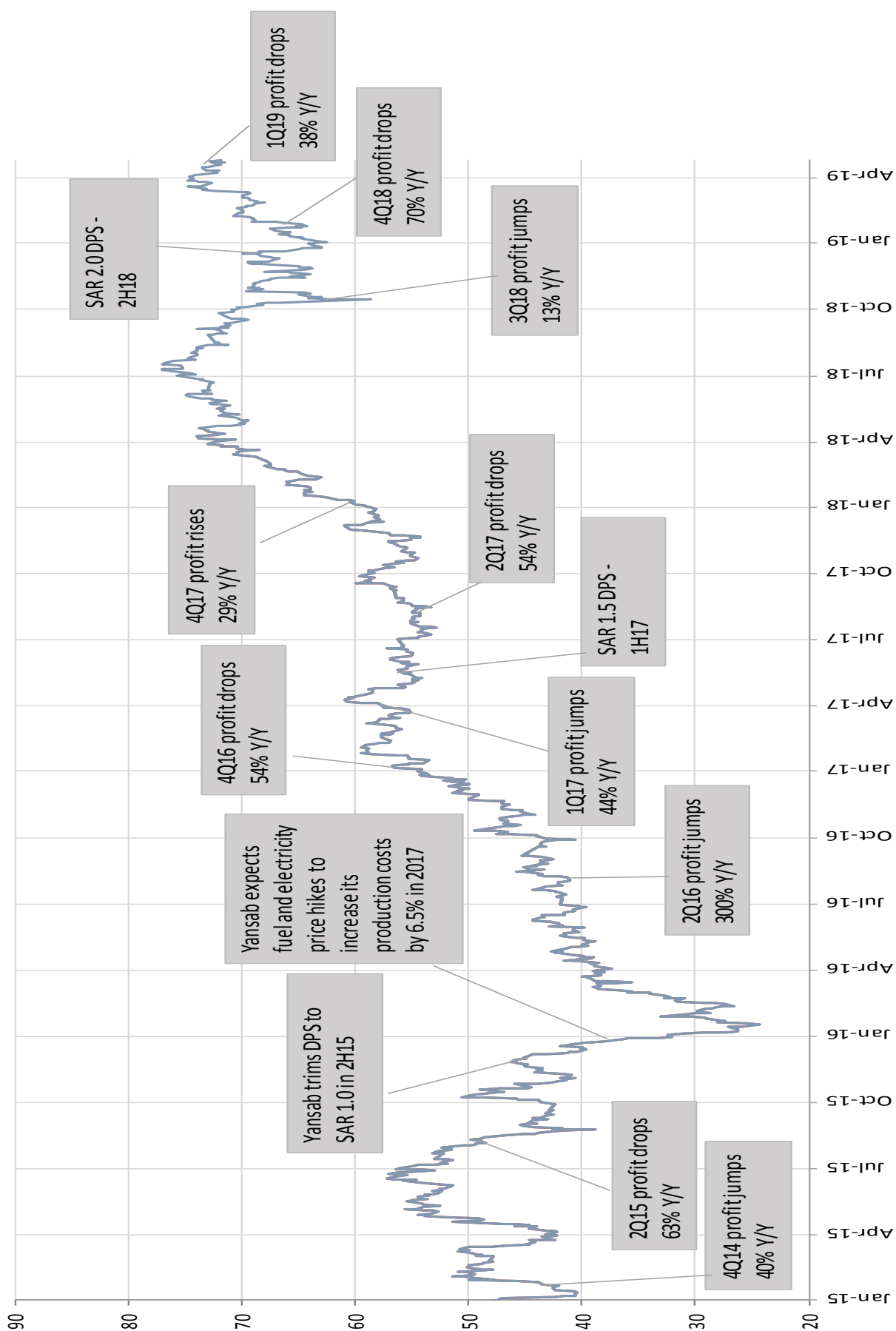
### Recommendation and Conclusion

We initiate coverage on Yanbu National Petrochemical Company (Yansab) with a Hold recommendation and SAR 73, 12-month target price. On valuation multiples the stock trades at 14.3x 2019E P/E versus group median of 12.2x, which is due to superior margins compared to local and international peers.

Key highlights for Yansab include high flexibility and financial strength mainly due to zero leverage and superior profit margins. Nevertheless, Yansab's considerable reliance on MEG is a point of worry due to supply increase in the upcoming years.



FIG 27: YANSAB'S PRICE PERFORMANCE



Source: Company Reports





## Summary Financials (Yansab)

Income Statement	2018	2019E	2020E	2021E
Sales	7,628	7,567	7,600	7,637
Cost of sales	(4,763)	(4,554)	(4,970)	(4,994)
Gross profit	2,865	3,013	2,631	2,644
G&A	(504)	(402)	(404)	(406)
Operating income	2,362	2,611	2,227	2,237
Associates & JVs				
Net finance cost	48	78	78	78
Other income	103	117	100	101
Non-controlling interest				
Zakat & income tax	(98)	(96)	(82)	(82)
Net income	2,414	2,711	2,323	2,334
Shares outstanding (mln)	563	563	563	563
EPS (SAR)	4.29	4.82	4.13	4.15
EBITDA	3,452	3,688	3,245	3,195
DPS (SAR)	3.75	3.75	3.75	4.00

2015-18	2018-21E
3%	0%
18%	(3%)
15%	(2%)
26%	(1%)
9%	(3%)

1Q19E	1Q18	Y/Y Chg	4Q18	Q/Q Chg
1,773	1,787	-0.8%	1,619	9.5%
(1,077)	(1,047)		(1,271)	
695	740	-6.0%	349	99.3%
(94)	(105)		(149)	
601	635	-5.3%	349	72.3%
20	1.3		20	
27	30		20	
(25)	(35)		(6)	
622	631	-1.3%	233	166.6%
563	563		563	
1.1	1.1		0.4	
917	899		479	

Balance Sheet	2018	2019E	2020E	2021E
Cash & equivalents	26	1,776	2,803	3,528
Inventories	770	686	749	752
Trade receivables	2,341	2,300	2,310	2,321
Other current items	3,090	3,090	3,090	3,090
Current assets	6,228	7,852	8,952	9,691
PP&E	12,617	11,923	11,208	10,480
Investments	-	-	-	-
Other non-assets	227	225	224	222
Total assets	19,072	20,001	20,384	20,393
Payables	410	700	788	782
ST debt	-	-	-	-
Other current items	934	952	1,031	959
Current liabilities	1,344	1,651	1,819	1,742
LT debt	-	-	-	-
Other non-current liabilities	472	493	495	497
Total liabilities	1,816	2,144	2,314	2,239
Total equity	17,256	17,857	18,071	18,155
Total liabilities & equity	19,072	20,001	20,384	20,393

CAGR	
2015-18	2018-21E
(66%)	413%
(1%)	16%
(3%)	2%
(21%)	9%
(31%)	7%
4%	2%
(3%)	2%

Growth (Y/Y)	2018	2019E	2020E	2021E
Sales	5.6%	-0.8%	0.4%	0.5%
EBITDA	-1.5%	6.8%	-12.0%	-1.5%
EBIT	-2.2%	10.5%	-14.7%	0.5%
Net income	1.6%	12.3%	-14.3%	0.5%

Margins	2018	2019E	2020E	2021E
Gross	37.6%	39.8%	34.6%	34.6%
EBITDA	45.3%	48.7%	42.7%	41.8%
EBIT	31.0%	34.5%	29.3%	29.3%
Net	31.6%	35.8%	30.6%	30.6%

Ratios	2018	2019E	2020E	2021E
Current	4.6x	4.8x	4.9x	5.6x
ROA	12.7%	13.6%	11.4%	11.4%
ROE	14.0%	15.2%	12.9%	12.9%
Payout	87.4%	77.8%	90.8%	96.4%
CCC	128	99	99	97
D / E	0.0x	0.0x	0.0x	0.0x
Net debt / EBITDA	0.0x	-0.5x	-0.9x	-1.1x

Statement of Cashflows	2018	2019E	2020E	2021E
Income before zakat & tax	2,512	2,806	2,405	2,416
Non-cash items	1,132	1,097	1,020	960
Working capital changes	468	433	95	(92)
Other items	(184)	(96)	(82)	(82)
Cash from operations	3,928	4,241	3,438	3,201
Purchase of PP&E	(751)	(379)	(298)	(224)
Other investing activities	(1,107)	(3)	(3)	(3)
Cash from investing	(1,858)	(382)	(301)	(227)
Net dividends	(1,966)	(2,109)	(2,109)	(2,250)
Debt (payments) / proceeds	(1,130)	-	-	-
Cash from financing	(3,097)	(2,109)	(2,109)	(2,250)
Change in cash	(1,026)	1,750	1,028	724
Beginning cash	1,052	26	1,776	2,803
Ending cash	26	1,776	2,803	3,528

CAGR	
2015-18	2018-21E
5%	(7%)
(10%)	(50%)
3%	(10%)

Valuation	2018	2019E	2020E	2021E
P / E	16.1x	14.3x	16.7x	16.6x
EV / EBITDA	10.7x	10.0x	11.4x	11.6x
P / S	5.1x	5.1x	5.1x	5.1x
P / B	2.2x	2.2x	2.1x	2.1x

### DCF Valuation Summary (SAR)

WACC	8.5%
Enterprise value (SAR mln)	37,903
Equity value (SAR mln)	39,678
Fair value per share	71



## Modest Share Price Upside

Saudi Kayan Petrochemical Co. (Kayan), is another affiliate of SABIC, which owns 35% of the company's shares. The Saudi Kayan petrochemical complex in Jubail is the first to produce polycarbonate in the Middle East.

### High exposure to butane as feedstock

Unlike ethane and methane, both of which have a fixed price that is currently set by the Saudi government, the price of butane in Saudi Arabia is based on the Japan benchmark price but with a 20% discount. With Kayan having feedstock usage that is mainly based on butane (85%), it results in the company having much more volatile COGS compared to its local peers.

### Debottlenecking projects

Saudi Kayan undertook two debottlenecking projects in its production complex in 2017. It resulted in a temporary drop in utilization rate but ultimately paid off and resulted in a considerable increase in production capacity.

### From loss making to a profitable company

As a result of the debottlenecking projects, along with enhanced operational efficiency and the integration of a new ethylene cracking furnace in order to introduce more ethane to its product mix, Kayan transformed from a loss making company (~SAR 1.2bn net loss in 2015) to a profitable one (~SAR 1.8bn net profit in 2018). Nevertheless, the company has not paid any dividends to shareholders yet.

### Initiate with Hold and SAR 14 target price

We applied DCF and relative valuation blended approach to value Kayan. For DCF, we assume 55-45 debt-equity mix yielding 7.2% WACC. We arrive at a fair value of SAR 14 per share, equating to 14.0x 2019E P/E versus 12.2x for global peers.

#### Rating Summary

Recommendation	Hold
12-Month Target Price (SAR)	14
Upside / (Downside)	11.6%
Dividend Yield	0%
Expected Total Return	11.6%

#### Stock Details (SAR)

Last Close Price	12.54
Market Capitalization (mln)	19,950
Shares Outstanding (mln)	1,500
52-Week High / Low	18.52 / 12.86
Price Change (YTD)	(10.2%)
12-Mth ADTV (000s)	8,827
Reuters / Bloomberg	2350.SE / KAYAN AB

	2018	2019E	2020E
Revenue (mln)	12,263	11,400	11,257
EBITDA (mln)	4,918	4,544	4,291
EPS	1.13	1.02	0.94
DPS	0.00	0.00	0.00

#### Key Shareholders

SABIC	35%
Free Float	65%

#### Price Multiples

	2018	2019E	2020E
P / E	11.0x	12.3x	13.3x
EV / EBITDA	8.0x	8.6x	9.1x
P / S	1.5x	1.6x	1.7x
P / B	1.2x	1.1x	1.0x

#### 1-Year Share Performance (rebased)



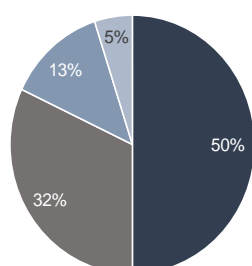




## Company Background

Saudi Kayan Petrochemical Company (Kayan) is another affiliate of SABIC (35% ownership). The company was established in 2006, and the Kayan petrochemical complex, which is the first producer of polycarbonate in the Middle East, started operations in 2010. It has an annual capacity of 6.6 MT in petrochemical products that mainly includes polyethylene, polypropylene, monoethylene glycol, ethylene oxide, butanol and polycarbonate. Its feedstock usage is 15% ethane and 85% butane.

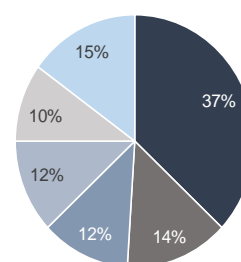
**FIG 28: GEOGRAPHICAL BREAKDOWN OF SALES**



■ Asia ■ Middle East & Africa ■ Europe ■ Other

Source: Company Reports

**FIG 29: SALES BREAKDOWN BY PRODUCT**



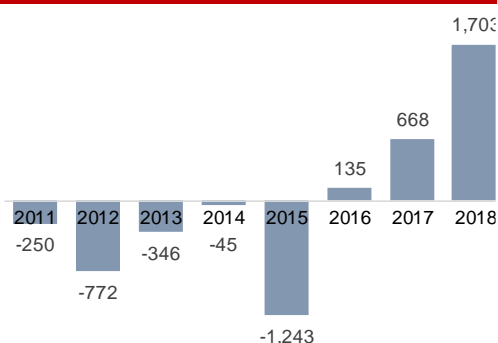
■ MEG ■ HDPE ■ Polypropylene ■ Butanol ■ LDPE ■ Other

Source: Company Reports

The price of butane is not fixed by the Saudi government. It is priced based on the butane price benchmark in Japan with a 20% discount. This makes the COGS of Kayan volatile compared with other local petrochemical firms. Nevertheless, the ethylene glycol plant expansion project that ended in Q4 2017 not only increased production capacity by 40 percent, but also introduced more ethane into the feedstock mix, lowering the average feedstock price for the company.

Up until 2016, Saudi Kayan never realized profits, and it has never paid any dividends. The reasons for these constant losses included maintenance shutdown, production delays, cost and time overruns in the projects that were being implemented and a drop in the prices of the company's products.

**FIG 30: EARNINGS (SAR MN)**



Source: Company Reports

In 2017, Saudi Kayan undertook two debottlenecking projects with a cost of SAR 435 mn for its olefins and ethylene oxide plants. The end result was an increase in annual production capacity for ethylene and ethylene oxide of 93,000 and 61,000 tons, respectively. Moreover, Kayan undertook a project to include a new ethylene cracking furnace in order to introduce more ethane into its feedstock mix, ultimately resulting in lower and more stable COGS. These projects paid off, and Kayan witnessed a significant

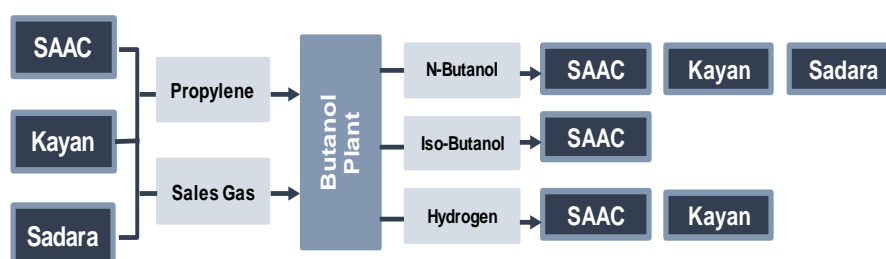


improvement in its plant operational reliability and performance in 2018, which was proven by an outstanding bottomline compared with previous years.

### Saudi Butanol Company (SaBuCo)

In 2013, Saudi Kayan, Sadara Chemical Company (Sadara) and Saudi Acrylic Company (SAAC) formed a joined venture to construct the first butanol plant in the Middle East and the largest in the world. Construction work commenced in 2014 and the plant was operational in March 2016. The plant produces 330,000 tons of n-butanol and 11,000 tons of iso-butanol annually, along with some hydrogen capacity as well. Both of these products are used as intermediates in the construction industry, and the plant specifically serves the expanding paints and coatings industry in KSA. The n-butanol produced will be distributed equally between Kayan, Sadara and SAAC, whereby each company is responsible for supplying their share of the feedstock needed and then offloading their share of the end product. Iso-butanol production will all be made available to SAAC, whereas one-third of hydrogen capacity will be distributed to SAAC and two-thirds of the capacity to Kayan. The joint venture added a new downstream product to Kayan's portfolio.

FIG 31: SABUCO JV STRUCTURE



Source: Argam

### Valuation

We applied a blended approach in our valuation for Kayan: discounted cash flow and relative valuation (EV/EBITDA).

#### Discounted Cash flow

In our DCF approach, we assume a capital structure of 45% equity and 55% debt, which reflects the current capital structure for Kayan. Cost of equity is calculated as 10.4% and cost of debt at 4.5% to come up with a WACC of 7.2%. In calculating the terminal value, we forecast a long-term growth rate of 2.5%. The DCF approach ascribes a fair value per share of SAR 14.

TABLE 10: DCF VALUATION

DCF (SAR mn)	2019E	2020E	2021E	2022E	2023E	2024E	2025E	Assumptions	
EBIT	2,440	2,268	2,207	2,179	2,000	1,909	1,780	Risk free rate	3.5%
+ Depreciation & amort	2,119	2,038	1,960	1,884	1,831	1,779	1,746	LT growth rate	2.5%
- Zakat	220	204	202	204	184	175	164	Beta	1.05
- Working capital changes	478	(29)	(128)	436	42	438	101	Equity risk premium	6.58%
- Capex	922	886	852	1,092	1,061	1,289	1,265	Cost of equity	10.4%
<b>FCFF</b>	<b>2,939</b>	<b>3,245</b>	<b>3,241</b>	<b>2,331</b>	<b>2,544</b>	<b>1,786</b>	<b>1,996</b>	Cost of debt	4.5%
PV of FCFF	14,180							% Debt	55%
PV of terminal value	27,067							% Equity	45%
Enterprise value	41,247							WACC	7.2%
Net debt	20,342								
Equity value	20,904								
Shares outstanding (mn)	1,500								
Value per share (SAR)	<b>14</b>								

Source: SFC



### Relative Valuation

We forecast EBITDA of SAR 4,544mn for 2019 and multiply it by industry average EV/EBITDA of 7.2x to come up with an equity value (after adjusting for net debt) of SAR 21.5bn, or SAR 14 per share.

TABLE 11: COMPS TRADING MULTIPLES

Company	BBG Symbol	Country	MKT Cap (USD mn)	P/E			EV/EBITDA			EV/Sales			P/B		
				2018	2019E	2020E	2018	2019E	2020E	2018	2019E	2020E	2018	2019E	2020E
LyondellBasell Industries N.V.	LYB US	UK	33,413	7.5x	8.0x	7.0x	5.7x	5.9x	5.5x	1.0x	1.0x	1.0x	3.1x	2.5x	2.2x
LG Chem, Ltd.	051910 KS	South Korea	24,786	15.9x	13.0x	14.8x	7.2x	6.2x	6.4x	1.0x	0.8x	0.8x	1.5x	1.4x	1.3x
Formosa Chemicals & Fibre Corporation	1326 TT	Taiwan	20,066	11.9x	13.1x	13.4x	11.1x	12.3x	12.4x	1.6x	1.7x	1.7x	1.7x	1.7x	1.6x
PETRONAS Chemicals Group Berhad	PICHEM MK	Malaysia	16,470	14.6x	15.0x	13.7x	8.4x	8.6x	7.9x	3.1x	3.1x	2.7x	2.3x	2.1x	1.9x
Braskem S.A.	BRKM5 BZ	Brazil	10,505	17.1x	11.5x	13.2x	6.0x	6.4x	6.6x	1.2x	1.2x	1.2x	5.3x	3.6x	3.0x
Rongsheng Petrochemical Co., Ltd.	002493 CH	China	10,044	27.3x	12.4x	9.5x	21.7x	7.7x	5.6x	1.4x	0.8x	0.6x	3.0x	2.5x	2.0x
PT. Chandra Asri Petrochemical Tbk	TPIA IJ	Indonesia	7,217	33.4x	28.9x	29.5x	16.2x	15.6x	14.6x	2.8x	2.9x	2.7x	3.9x	3.5x	3.2x
Saudi Basic Industries Corporation	SABIC AB	KSA	98,238	16.2x	16.1x	15.8x	7.3x	7.5x	7.9x	2.3x	2.5x	2.5x	2.0x	2.0x	1.9x
Yanbu National Petrochemical Company	YANSAB AB	KSA	10,065	14.9x	16.4x	16.2x	10.5x	11.1x	11.4x	4.8x	4.9x	5.1x	2.1x	2.2x	2.1x
National Petrochemical Company	PETROCH AB	KSA	3,430	11.6x	11.4x	12.0x	7.2x	7.2x	7.4x	2.4x	2.4x	2.6x	1.5x	1.4x	1.5x
Advanced Petrochemical Company	APPC AB	KSA	2,886	14.9x	13.4x	14.9x	12.3x	11.5x	12.2x	4.2x	3.9x	4.0x	3.2x	3.1x	3.0x
National Industrialization Company	NIC AB	KSA	2,833	8.1x	9.6x	11.8x	7.3x	7.8x	8.5x	2.2x	2.3x	2.5x	1.1x	1.0x	0.9x
Saudi Industrial Investment Group	SIIG AB	KSA	2,820	9.3x	8.9x	8.9x	7.3x	7.3x	7.3x	2.7x	2.6x	2.6x	1.4x	1.3x	1.3x
Korea Petrochemical Ind. Co., Ltd.	006650 KS	South Korea	945	4.9x	4.7x	na	2.8x	2.8x	3.2x	0.5x	0.4x	0.5x	0.6x	0.5x	na
Westlake Chemical Partners LP	WLKP US	US	748	14.6x	12.1x	10.8x	3.6x	3.6x	3.6x	1.4x	1.3x	1.2x	3.4x	2.6x	2.1x
Trecora Resources	TREC US	US	209	44.4x	11.7x	na	12.4x	7.3x	na	1.1x	1.0x	na	1.1x	1.0x	na
<b>Median</b>				<b>14.8x</b>	<b>12.2x</b>	<b>13.3x</b>	<b>7.3x</b>	<b>7.4x</b>	<b>7.4x</b>	<b>1.9x</b>	<b>2.0x</b>	<b>2.5x</b>	<b>2.1x</b>	<b>2.1x</b>	<b>2.0x</b>
<b>Saudi Kayan</b>	<b>KAYAN AB</b>	<b>Saudi Arabia</b>	<b>5,376</b>	<b>11.0x</b>	<b>12.3x</b>	<b>13.3x</b>	<b>8.0x</b>	<b>8.6x</b>	<b>9.1x</b>	<b>3.2x</b>	<b>3.4x</b>	<b>3.5x</b>	<b>1.2x</b>	<b>1.1x</b>	<b>1.0x</b>

Source: Bloomberg, SFC

### Recommendation and Conclusion

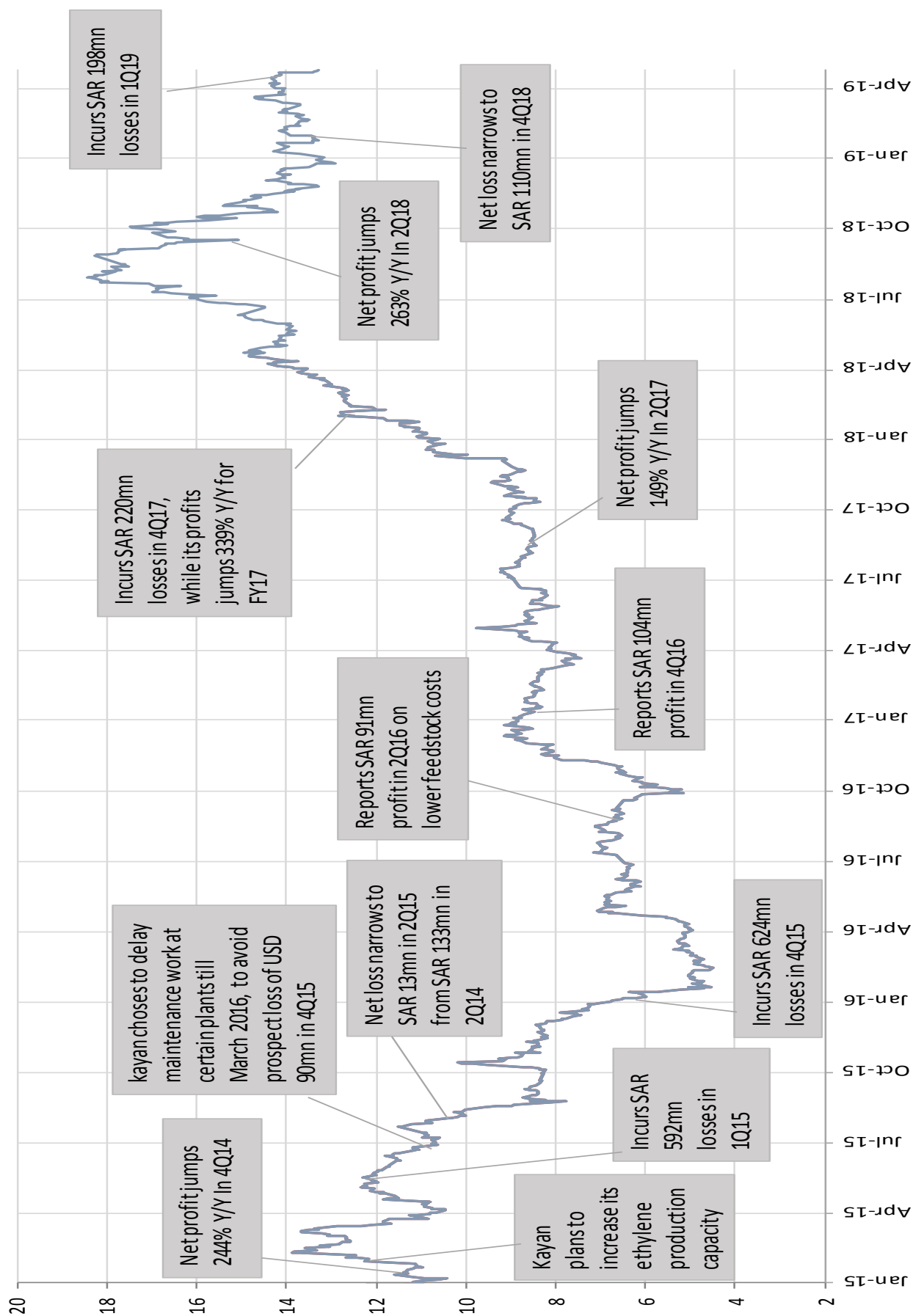
We initiate coverage on Saudi Kayan with a Hold recommendation and SAR 14, 12-month target price. On valuation multiples the stock trades 12.3x 2019E P/E versus group median 12.2x, which is a more conservative multiple than SABIC and Yansab.

Key highlights for Kayan include a feedstock mix resulting in more volatile COGS, but room for growth going forward after debottlenecking exercise that resulted in additional capacity and enhanced operational efficiency.





FIG 32: KAYAN'S PRICE PERFORMANCE



Source: Company Report



## Summary Financials (Kayan)

SAR mln, ending Dec-31<sup>st</sup>

Income Statement	2018	2019E	2020E	2021E	CAGR	
					2015-18	2018-21E
Sales	12,263	11,400	11,257	10,850	15%	(4%)
Cost of sales	(8,898)	(8,305)	(8,342)	(8,020)		
Gross profit	3,365	3,095	2,915	2,831	152%	(6%)
G&A	(705)	(655)	(647)	(624)		
Operating income	2,661	2,440	2,268	2,207	65%	(6%)
Associates & JVs	48	69	64	63		
Net finance cost	(916)	(843)	(793)	(743)		
Other income	88	85	79	77		
Non-controlling interest						
Zakat & income tax	(179)	(220)	(204)	(202)		
Net income	1,702	1,531	1,415	1,402	-	(6%)
Shares outstanding (mln)	1,500	1,500	1,500	1,500		
EPS (SAR)	1.13	1.02	0.94	0.93		
EBITDA	4,917	4,544	4,291	4,152	38%	(5%)
DPS (SAR)	0.00	0.00	0.00	0.00		

1Q19E	1Q18	Y/Y Chg	4Q18	Q/Q Chg
2,509	2,727	-8.0%	2,636	-4.8%
(1,832)	(1,866)		(2,362)	
677	862	-21.4%	274	147.7%
(129)	(141)		(212)	
548	721	-24.0%	62	790.9%
8	9		11	
(235)	(212.0)		(231)	
(17)	(22)		100	
(20)	(33)		(52)	
284	463	-38.7%	-111	-355.9%
1,500	1,500		1,500	
0.2	0.3		(0.1)	
-	-		-	

Balance Sheet	2018	2019E	2020E	2021E	CAGR	
					2015-18	2018-21E
Cash & equivalents	2,377	2,977	4,412	5,879	11%	35%
Inventories	1,659	1,707	1,714	1,648		
Trade receivables	2,822	3,123	3,084	2,973		
Other current items	2,315	2,345	2,340	2,326		
Current assets	9,174	10,152	11,550	12,825	15%	12%
PP&E	30,723	29,540	28,403	27,309		
Investments	351	421	485	548		
Other non-assets	447	440	433	426		
Total assets	40,695	40,552	40,871	41,108	(1%)	0%
Payables	1,000	915	915	872		
ST debt	1,522	1,402	1,320	1,237		
Other current items	774	758	750	730		
Current liabilities	3,296	3,075	2,985	2,839	(8%)	(5%)
LT debt	21,197	19,735	18,735	17,735		
Other non-current liabilities	504	513	507	488		
Total liabilities	24,996	23,323	22,227	21,062	(5%)	(6%)
Total equity	15,699	17,229	18,644	20,046	nm	8%
Total liabilities & equity	40,695	40,552	40,871	41,108	(1%)	0%

Growth (Y/Y)	2018	2019E	2020E	2021E
Sales	22.8%	-7.0%	-1.3%	-3.6%
EBITDA	25.2%	-7.6%	-5.6%	-3.2%
EBIT	63.2%	-8.3%	-7.1%	-2.7%
Net income	154.7%	-10.1%	-7.6%	-0.9%

Margins	2018	2019E	2020E	2021E
Gross	27.4%	27.1%	25.9%	26.1%
EBITDA	40.1%	39.9%	38.1%	38.3%
EBIT	21.7%	21.4%	20.1%	20.3%
Net	13.9%	13.4%	12.6%	12.9%

Ratios	2018	2019E	2020E	2021E
Current	2.8x	3.3x	3.9x	4.5x
ROA	4.2%	3.8%	3.5%	3.4%
ROE	10.8%	8.9%	7.6%	7.0%
Payout	0.0%	0.0%	0.0%	0.0%
CCC	89	127	135	137
D / E	1.4x	1.2x	1.1x	0.9x
Net debt / EBITDA	4.1x	4.0x	3.6x	3.2x

Statement of Cashflows	2018	2019E	2020E	2021E	CAGR	
					2015-18	2018-21E
Income before zakat & tax	1,881	1,751	1,618	1,604		
Non-cash items	3,194	3,054	2,924	2,798		
Working capital changes	(621)	(478)	29	128		
Other items	(1,021)	(1,155)	(1,090)	(1,040)		
Cash from operations	3,433	3,172	3,482	3,490	7%	1%
Purchase of PP&E	(257)	(922)	(886)	(852)		
Other investing activities	(1,858)	(8)	(8)	(8)		
Cash from investing	(2,116)	(930)	(894)	(860)	51%	(26%)
Net dividends	-	-	-	-		
Debt (payments) / proceeds	(1,455)	(1,582)	(1,082)	(1,082)		
Cash from financing	(1,455)	(1,582)	(1,082)	(1,082)	(12%)	(9%)
Change in cash	(137)	660	1,506	1,548		
Beginning cash	2,514	2,377	3,037	4,543		
Ending cash	2,377	3,037	4,543	6,091		

Valuation	2018	2019E	2020E	2021E
P / E	11.0x	12.3x	13.3x	13.4x
EV / EBITDA	8.0x	8.6x	9.1x	9.4x
P / S	1.5x	1.6x	1.7x	1.7x
P / B	1.2x	1.1x	1.0x	0.9x

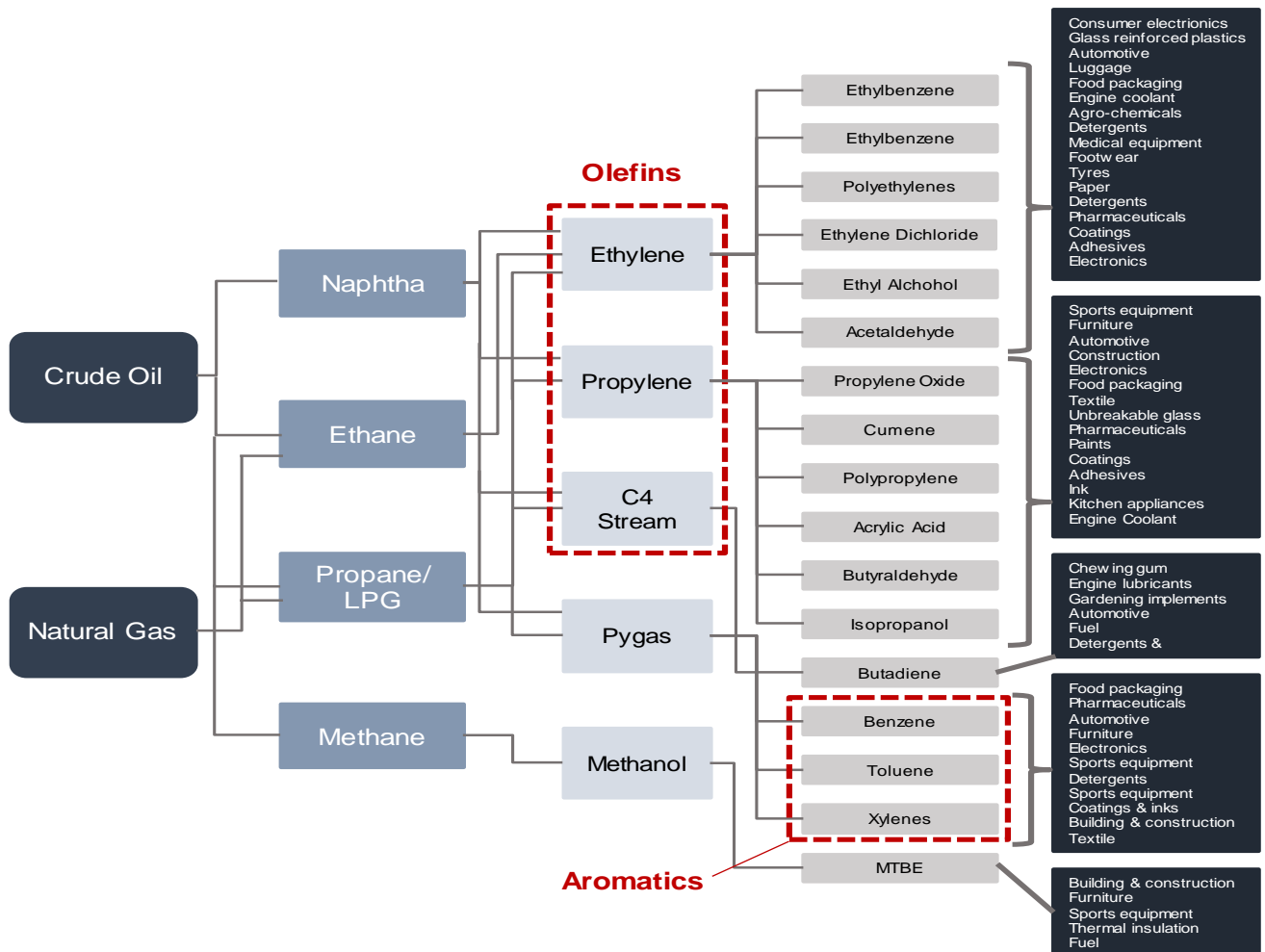
### DCF Valuation Summary (SAR)

WACC	7.2%
Enterprise value (SAR mln)	41,247
Equity value (SAR mln)	20,904
Fair value per share	14



## Appendix

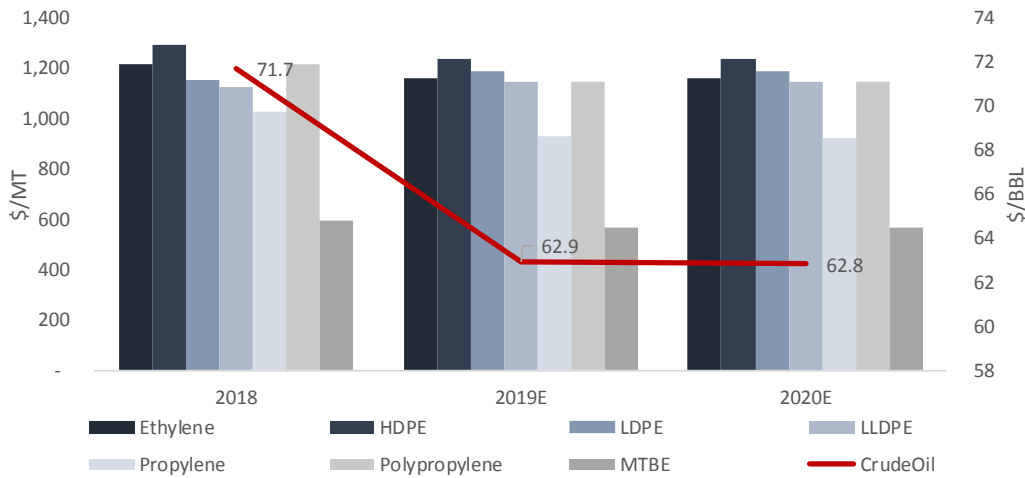
### PETROCHEMICAL PRODUCTS END USES



Source: MDPI, Argam, Petrochemistry

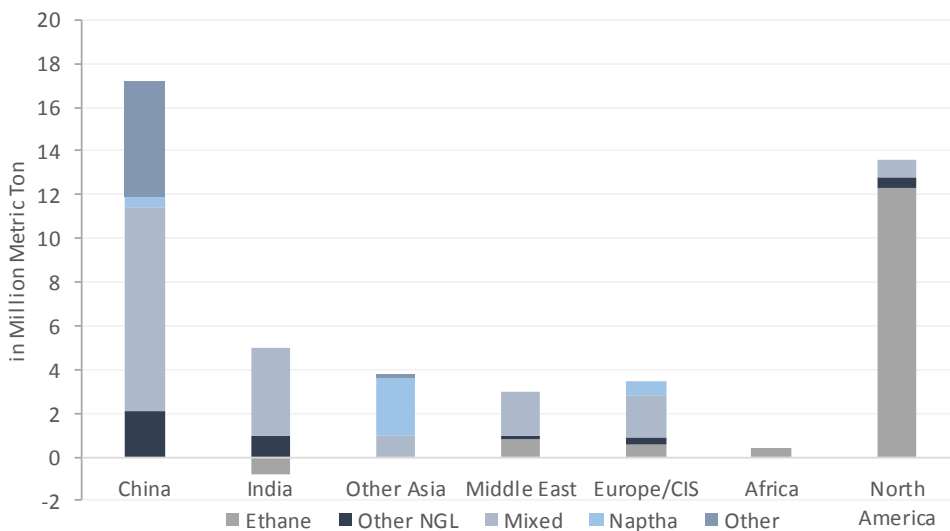


## PETROCHEMICAL PRICES (\$/MT) VS CRUDE OIL (\$/BBL)



Source: Bloomberg

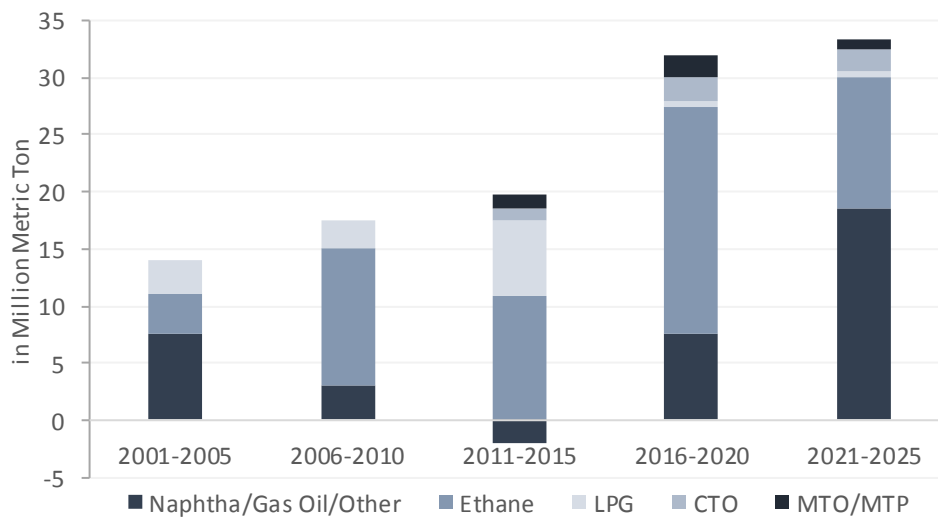
## WORLD ETHYLENE CAPACITY ADDITIONS: 2017-2022 (MILLION METRIC TONS)



Source: IHS Markit

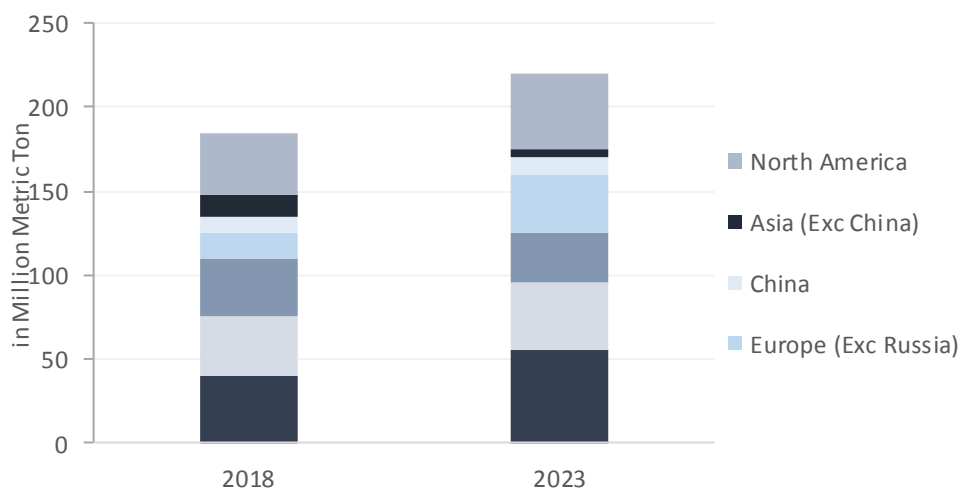


## GLOBAL ETHYLENE GROWTH BY FEEDSTOCK (MILLION METRIC TONS)



Source: IHS Markit

## GLOBAL ETHYLENE CAPACITY SET TO HIT 220MN METRIC TONS BY 2023



Source: EMIS Database - Petrochemical Report by FitchSolutions



## Research and Advisory Department

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### Rating Framework

#### **BUY**

Shares of company under coverage in this report are expected to outperform relative to the sector or the broader market.

#### **HOLD**

Shares of company under coverage in this report are expected to perform inline with the sector or the broader market

#### **SELL**

Shares of company under coverage in this report are expected to underperform relative to the sector or the broader market.

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